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"BLACK MONDAY," THE STOCK MARKET CRASH OF OCTOBER 19, 1987

HEARINGS

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

THE TURBULENCE IN THE FINANCIAL MARKETS LAST OCTOBER, THE FUNCTIONING OF OUR FINANCIAL MARKETS DURING THAT PERIOD, AND PROPOSALS FOR STRUCTURAL AND REGULATORY REFORMS

FEBRUARY 2, 3, 4, AND 5, 1988

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"BLACK MONDAY," THE STOCK MARKET CRASH OF OCTOBER 19, 1987

TUESDAY, FEBRUARY 2, 1988

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 10:04 a.m., in room SD–538 of the Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Riegle, Sarbanes, Dixon, Sasser, Sanford, Shelby, Graham, Wirth, Garn, Heinz, D'Amato, Hecht, Gramm, Bond, and Chafee.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

We love you photographers and we hope you take our picture so it will be in the paper and everywhere else, but we hope that you will clear the way so we can see the witness.

Today we begin 4 days of hearings on Black Monday, Terrible Tuesday, the stock market crash felt around the world.

First, we are privileged to hear from Nicholas Brady, our friend and former committee colleague, now head of Dillon, Read & Co., and here today as Chairman of the Presidential Task Force on Market Mechanisms. I want to compliment you, Senator Brady, on producing a superb document. It wasn't easy. You had 60 days to do a tremendous amount of work, and I think you and your colleagues who worked on the report did a fine job.

At its center, the report emphasizes that the three markets for stock, futures, and options have become one market. Indeed, the major players consider them as a single market.

Despite this unified market, regulatory oversight is divided. Futures are policed not by the Securities and Exchange Commission, but by self-regulatory organizations supervised by the Commodities Futures Trading Commission. The Federal Reserve exercises margin authority over stocks and options, but their authority over futures is disputed and has never been tested.

These various agencies can cooperate and their joint efforts are laudable. Yet systemic problems result from balkanized regulation. For starters, the separate exchanges have a built-in incentive to soften regulation in order to compete for business. Policing is frustrating. Intermarket frontrunning, where firms with inside knowledge about imminent stock trade profit by investing their own funds in the futures market, is a good example of a problem that falls through the cracks of our existing regulatory framework.

SEC Chairman Ruder has already testified that there was no adequate emergency system in place to address the crash. Specific stocks closed for long periods on the New York Stock Exchange, without regard for how this move affected Chicago's future markets. The Chicago Board of Options Exchange unilaterally decided to close, killing the chance of some investors to exercise assurance that certain options strategies provide.

In sum, as we came within a gnat's eyelash of complete collapse on Terrible Tuesday, October 20, our fragment regulatory network was in no strong position to protect us from a free fall.

Moreover, there is no one that Congress can hold accountable. In the aftermath of the crash, both the New York and Chicago exchanges pointed the finger of blame at the other.

Well, we lucked out last time, but we can't bank on luck again. As the Brady Commission advises, Congress must readdress the issue of appropriate regulation.

Future and stock markets are governed by separate regulators because Congress ratified an accord worked out in 1981 by the heads of the Commodities Futures Trade Commission and the Securities and Exchange Commission. They testified that the two markets were distinct, that they were not linked, and therefore that divided regulation was appropriate.

It required the apocalypse of Black Monday, where American stock investors lost a collective—during that week, I should say, not on Black Monday but in that week they lost a collective $1 trillion, to dramatize the Brady Commission finding that the markets are indeed linked.

Where do we go from here? First, we must reaffirm our basic principles. Among these is that the primary purpose of our securities markets is to raise capital for enterprise. They are not a forum for speculation. Yet there is evidence to suggest that speculation has come to outweigh investment fundamentals. For example, a poll by Yale economist Robert Shiller showed that two-thirds of the individual and 93 percent of the institutional investors buying before the crash believed the market was overpriced.

Think of that. Two-thirds of the investors and 93 percent of the institutional investors believed that the market was overpriced. But they bought anyway in the speculative hope that they could get out before the crash, which was wrong in many cases.

A second basic principle is that we must preserve the confidence of investors in the integrity and stability of the market. How many roller coaster days on Wall Street can we have before investors, large and small, begin losing confidence in our securities markets? Should investors conclude that equities are too risky and volatile and withdraw permanently from the markets? If they do that, the cost of capital will increase and economic growth will suffer.

The stakes are high. Congress must neither be hasty nor lazy. Whether or not the Great Crash of 1987 announces a recession remains an open question. It is one thing for the market to announce a recession and quite another for poor regulation to let market mechanisms go unrepaired and risk further disruptions that unnecessarily impair growth, capital formation, and our economic future.

Mr. Brady, at the end of chapter 7 of your report, you add these wise words that the committee should keep in mind during these hearings, and I quote:

> The pressing need for coordination of intermarket issues is the chief lesson to be learned from the October experience. Rationalizing intermarket issues is the key to avoiding future market crises and insuring the efficiency and competitiveness of U.S. markets.

Senator Garn.

OPENING STATEMENT OF SENATOR GARN

Senator **Garn**. Thank you, Mr. Chairman.

As you mentioned, we begin 4 days of hearings today on the events surrounding last October 19. I am certainly pleased, Senator Brady, to welcome you here before us today, and I want to commend you and your Commission for a job that I think was very well done.

The report of the Brady Task Force is clear and well-written and it takes a very balanced and measured approach to the consequences of October 19. I think we will all be anxious to learn more about it today through your observations and recommendations and also the other reports that we will learn about in the next few days.

I also want to emphasize that this is an area that Congress should consider very carefully before deciding what actions, if any, ought to be taken. In my 13 years in the Senate, we usually tend to overreact to crises. This is one area where I am wary of taking actions that could impair our position as the world's central financial marketplace.

Obviously, some problems need addressing, like differences in margins and intermarket clearing mechanisms, but we do not want to unilaterally impose burdensome regulations that drive investors overseas.

So I hope this committee can reach a balanced view of the problems we face and what ought to be done about them, without overreacting. And I will certainly be working with the chairman and the other members of the committee to achieve that goal.

Thank you, Mr. Chairman.

The **Chairman**. Senator Riegle.

OPENING STATEMENT OF SENATOR RIEGLE

Senator **Riegle**. Mr. Chairman, my comments today will also reflect the fact that I serve as the chairman of the Securities Subcommittee and with several colleagues on this committee. Senator D'Amato and Senator Armstrong are very much involved in that area on the other side of the aisle.

I think these hearings are the most important we will have in the Congress this year. On October 20 of last year, between the hours of 11 a.m. and 2 p.m., our financial system experienced major market mechanism malfunctions, and it nearly collapsed.

Since it has happened once, it can clearly happen again. Many people think that next time could be far worse unless, in the meantime, self-regulatory organizations and the independent regulatory agents can make some needed adjustments, and clearly as well I think the administration and the Congress have a role in that area.

I think it is clear if we think about it, that our economic future depends upon vigorous private sector capital investment. It is the story of American success over the last 200 years. If our capital markets break down, our country would sustain massive economic damage. In the end, that would affect every citizen in our country.

I think the Brady Commission has done really an exceptional job in reconstructing the events of October 19 and 20 within the time limits imposed upon them. These findings are powerful and they are extremely important, and I think we have to act upon them.

One sentence from that report is as follows and I quote: "Although Monday was the day of the dramatic stock market decline, it was midday Tuesday that the securities market and the financial system approached breakdown." The use of the word "breakdown" was the choice of the Commission in its unanimous findings.

Of their findings and observations, what they have said leads to the following conclusions: That we have an increasingly integrated marketplace, but a divided regulatory system. We also have no coordination of major market regulatory policy at the top and no accountability mechanism in times of crisis. In the future, we need more direct centralized accountability.

It also appears that advances in computer technology and the development of market-based derivative instruments have permitted the development of portfolio strategies which treat common stock equities as a market basket commodity. This has led to portfolio practices by large institutional investors which clearly challenge the capabilities of the current financial markets.

In fact, the Brady report suggests that on October 19 and 20, these practices played a major role in the near breakdown of the system. I believe we must hear from Treasury Secretary Baker with respect to the administration's position on the Brady report and recommendations. The question remains: Does the administration support it?

I am also concerned about a number of things that have been brought to my attention as a result of the October 19 market crash. For example, I find it deeply disturbing, if the Brady findings are correct, that only a handful of large institutional investors were able to provide the impetus for the 508-point Dow decline on October 19.

Both the regulators and the independent self-regulatory agencies should address the question of what controls might be needed to ensure orderly trading by large institutions. This would help dispel current notions that the biggest players now have the capacity to influence the market in a destructive way and possibly, therefore, even manipulate the market if they so choose.

Cross-market frontrunning, or trading in one market on knowledge of imminent events in another market, is clearly going to have to be looked at and investigated very carefully by both the Congress, the independent regulatory agencies, and the self-regulatory organizations. In all likelihood, we will need new surveillance mechanisms for monitoring and policing frontrunning. In fact, the Insider Trading Proscriptions Act of 1987, which I introduced together with Senator D'Amato back in June of last year, would prohibit that kind of activity.

We will also have to improve the gathering of information and the capability of the Government in that area as it relates to the securities market. The Brady Commission recommends the creation of a trading information system which would incorporate the trade, the time of the trade, and the name of the ultimate customer in every major market segment. I know some don't agree with that. It is a very important recommendation.

But, without such a system, I don't know how we can adequately conduct a responsible surveillance and enforcement program, so I think we have to seriously consider that.

No other issue will be more important throughout these hearings than helping to restore the confidence in the markets on the part of individual investors. It is now generally well recognized that during the extreme volatility of market prices on October 19 and 20, many small investors were at an apparent disadvantage in their ability to place their buy and sell orders, and in the speed with which their orders were executed.

Consideration has to be given to methods for ensuring access to the markets and perhaps to guaranteeing that individual orders are executed before institutional orders when they are placed at the same time.

Along the same lines, we must examine the impact of the recent market volatility on the capital formation process. Does this new volatility make it significantly more difficult for new companies to raise capital, and is it more expensive? If the recent market volatility affects the capital formation process, then job creation may be affected, and this issue would take on even greater importance.

Finally, this: The events surrounding October 19, I think conclusively prove that the globalization of the financial markets is already here, as financial institutions flip their order books electronically around the world from Tokyo, to London, to New York at the end of each trading day.

A global electronic market which knows no boundaries and which will inevitably grow in future years reinforces my conviction that the United States should take the lead in establishing an International Securities Regulatory Commission. It is needed now, and we don't have any more time to waste in putting it together.

So with that, Mr. Chairman, I very much look forward to offering some specific questions to Mr. Brady and others that are with him.

The CHAIRMAN. Thank you, Senator Riegle.

The members will be recognized based on their order of appearances, which has been our custom.

The next appearing Senator on the minority side is Senator D'Amato.

Senator D'AMATO. Thank you, Mr. Chairman. Mr. Chairman, it is good to see Senator Brady here. I commend him for his work.

I would ask, Mr. Chairman, that my statement be included in the record as if read in its entirety.

The CHAIRMAN. Without objection, so ordered.

OPENING STATEMENT OF SENATOR D'AMATO

Senator D'Amato. Mr. Chairman, I concur with the observations made by Senator Garn. We have a tendency to overreact, overdramatize—not to diminish the importance of these hearings or the effect of October 19. The fact remains that there are some very real questions that one should review.

If one looks at the record, we will see that we had accounts of what took place. One New York publication said: "Future generations, if there are any, will hereafter regard October 19, 1987, as the date that marked indelibly the beginning of the end of the American empire."

And we can take statement after statement. Certainly there are some problems. We have to look at them. What about program trading? When should it be allowed? Under what circumstances? Are the margins sufficient?

What about the role of the Federal Reserve? I have to suggest here to you that this is one Senator, notwithstanding the fact that they obviously are the people who can provide liquidity—we understand that—but I am very much concerned when I see a report that recommends the Federal Reserve be given the responsibility for intermarket regulation. I don't know exactly what that means.

I have to tell you something. You look at their track record and say this is the same group that, over the years, has said everything is hunky-dory with our foreign loans, going back to the 1960's and the 1970's. And this is the same group now that we are going to give intermarket regulation or responsibility.

I want to tell you, anybody that could say that those loans to Poland and to the other countries were good and let the big banks continue to make them, let them continue to report them as OK for years and years, that is not a group that I am so quick to say they should have this responsibility.

So I concur with Senator Garn and his pronouncement that, sure, we have to look at this thing, but let's not become so hysterical, let's not try to be so outrageous in our comments, in our perspective, that we fail to see that this bill is a strong system. It has some flaws. We can do certain things to strengthen it. Let's examine them carefully. Let's bring in the people who do deal in this situation, who can explain to us why there were facts such as Senator Riegle mentioned, where a little investor could not sell his stock.

Do we have to do something to deal with it? I think we do, but let's be somewhat temperate as we approach this situation, analyze it and attempt to deal with it in a manner which will not create further turbulence.

Thank you, Mr. Chairman.

[The complete prepared statement of Senator D'Amato follows:]

Alfonse M D'Amato

STATEMENT OF SENATOR ALFONSE M. D'AMATO

FEBRUARY 2, 1988

I WOULD LIKE TO WELCOME NICK BRADY TO THE COMMITTEE AND COMMEND THE CHAIRMAN FOR HOLDING THESE HEARINGS NOW, AT A TIME WHEN WE'VE HAD AN OPPORTUNITY TO PUT THE EVENTS OF OCTOBER 19TH AND 20TH INTO A SOMEWHAT CLEARER PERSPECTIVE. DURING THE NEXT SEVERAL DAYS OF HEARINGS ON THE EVENTS OF OCTOBER 19TH, MANY MAY BE TEMPTED TO USE THESE HEARINGS TO CHARACTERIZE WALL STREETERS AND THE CHICAGO COMMODITIES FELLOWS AS GREEDY AND VENAL TYPES, TO CONDEMN THE FINANCIAL MARKETS AS NOTHING MORE THAN CASINOS, TO HARANGUE FEDERAL REGULATORS FOR THEIR LAISSEZ FAIRE ATTITUDES WHICH LED TO A NEAR DEBACLE AND TO ACCUSE THE VARIOUS SELF-REGULATORS A LAX OR NON-EXISTENT ENFORCEMENT OF THEIR STANDARDS. SUCH CHARGES ARE NOT ONLY DAMAGING BECAUSE THEY ARE GROSS DISTORTIONS OF THE FACTS, BUT BECAUSE THEY WILL TEND TO ERODE RATHER THAN RESTORE INVESTOR CONFIDENCE. IF THESE HEARINGS DEGENERATE INTO A FINGER POINTING EXERCISE, THEN THEY WILL AMOUNT TO A PRODIGAL WASTE OF OUR TIME.

TO PARAPHASE AN ADVERTISEMENT FROM AN INVESTMENT BANKING COMPANY, WE SHOULD MAKE IT CLEAR TO THE AMERICAN PEOPLE AND THE INVESTING PUBLIC: "WHERE WE STAND TODAY." FIRST, THE END OF CIVILIZATION AS WE KNOW IT DID NOT RESULT FROM THE EVENTS OF OCTOBER 19. IN THE DAYS FOLLOWING THE "CRASH" THE MEDIA'S HYSTERIA SEEMINGLY KNEW NO BOUNDS. FOR EXAMPLE, THE NEW YORK OBSERVER TRUMPETED: "FUTURE GENERATIONS, IF THERE ARE ANY, WILL HEREAFTER REGARD OCT. 19, 1987 AS THE DATE THAT MARKED INDELIBLY THE BEGINNING OF THE END OF THE AMERICAN EMPIRE."

HYSTERICS AROUND THE COUNTRY WENT INTO A VIRTUAL FEEDING FRENZY BASED ON THIS TYPE OF HYPE. THOSE WHO HAD PREDICTED RECESSIONS IN 1986 AND THEN AGAIN IN 1987 SEEMED TO TAKE HEART IN THE SPECTRE OF A MARKET COLLAPSE. AND MANY OF THOSE WHO HAVE CLAIMED THE MARKETS HAVE DEGENERATED INTO A CASINO VIEW OCTOBER 19TH AS THE HARBINGER OF THE SECOND COMING OF THE NEW DEAL.

ALTHOUGH IT HAS BEEN LESS THAN 4 MONTHS SINCE OCTOBER 19TH, IN RETROSPECT, THE HYSTERIA GLEEFULLY PROPAGATED BY THE DOOMSDAYERS IS ALMOST QUAINT.

SECOND, WHAT WE SHOULD BE MORE CONCERNED WITH CONGRESSIONAL OVERREACTION RATHER THAN INACTION. I CANNOT RECALL THE NUMBER OF TIMES SENATORS GARN AND PROXMIRE HAVE ARGUED THAT GLASS-STEAGALL REFORM IS NECESSARY BECAUSE IT REPRESENTED CONGRESSIONAL OVERREACTION TO THE GREAT DEPRESSION. MANY WHO URGE THE REPEAL OF GLASS-STEAGALL ARGUE THAT CONGRESS, ALTHOUGH WELL-INTENDED, ENACTED UNNECESSARY, CRISIS DRIVEN LEGISLATION THAT HAD NOTHING TO DO WITH THE CAUSES OF THE CRASH OF 1929 AND STILLL HOBBLES THE AMERICAN ECONOMY. OVER FIFTY YEARS LATER, GLASS-STEAGALL STILL STANDS IN THE EYES OF MANY AS A MONUMENT TO THE LEGISLATIVE EXCESSES OF CONGRESS.

THIRD, ALTHOUGH WE MAY HAVE BEEN A HARE´S BREADTH AWAY FROM A MARKET MELTDOWN, WHETHER BY DIVINE INTERVENTION OR THROUGH MARKET MECHANISMS, A MELTDOWN WAS AVOIDED. IN FACT, THE MARKET CLOSED IN 1987 OVER A HUNDRED POINTS HIGHER THAN IT HAD IN 1986. DESPITE ITS PURPORTED FLAWS AND IMPERFECTIONS, THE MARKETS MANAGED TO MUDDLE THROUGH AN UNPRECEDENTED AMOUNT OF TRADING WITHOUT TOTALLY BREAKING DOWN. WHILE THE NEAR COLLAPSE IS A CAUSE OF CONCERN, THE AVOIDANCE OF FAILURE SHOULD ALSO BE CAREFULLY ANALYZED TO IDENTIFY THE REAL UNDERLYING STRENGTHS OF THIS NEW MARKET ENVIRONMENT WE HAVE ENTERED.

FOURTH, THE ROLE OF THIS COMMITTEE SHOULD BE TO DETERMINE WHAT NEW MARKET MECHANISMS SHOULD BE EMPLOYED TO STRENGTHEN THE STRUCTURE OF OUR MARKETS. WE MUST REMEMBER THAT THE PROBLEMS EXPERIENCED BY INVESTORS IN THE STOCK AND COMMODITIES EXCHANGES ON OCTOBER 19TH AND 20TH WERE SYMPTOMS, RATHER THAN CAUSES OF THE MARKET COLLAPSE. THE CRASH WAS LARGELY CAUSED BY MEASURABLE ECONOMIC FACTORS AND CHANGES IN INVESTOR CONFIDENCE IN THE HEALTH OF THE ECONOMY. THERE ARE NO LEGISLATIVE REFORMS WHICH THIS COMMITTEE CAN RECOMMEND THAT COULD PREVENT THE CONFLUENCE OF ECONOMIC FACTORS THAT LED TO THE CRASH. HOWEVER, WE MUST ATTEMPT TO DETERMINE THE EXTENT TO WHICH NEW MARKET MECHANISMS THAT ENCOURAGE SPECULATION CONTRIBUTED TO MARKET VOLATILITY WHICH IN TURN FUELED THE CRASH. IF THESE NEW MARKET MECHANISMS EXACERBATED A DOWNTURN IN THE MARKET, THEN CONGRESSIONAL ACTION SHOULD BE TAKEN ONLY IF THE REGULATORS AND MARKET PARTICIPANTS FAIL TO RESPOND.

FIFTH, REMEMBERING THAT SPECIFIC RECOMMENDATIONS MAY BE PREMATURE WITHOUT THE BENEFIT OF THE SEC REPORT (DUE OUT TOMORROW) OR THE COMMITTEE HEARINGS ON THE VARIOUS REPORTS ALREADY SUBMITTED TO THE COMMITTEE, THE INITIAL FOCUS OF OUR INQUIRY SHOULD BE ON THE:

(1) IMPACT OF PROGRAM TRADING, INDEX ARBITRAGE AND PORTFOLIO INSURANCE ON THE VOLATILITY OF THE STOCK MARKET;

(2) NEED FOR GREATER COORDINATION BETWEEN THE SELF-REGULATORY AND FEDERAL REGULATORY AGENCIES THAT REGULATE PARTICIPANTS IN THE COMMODITIES AND FUTURES MARKETS;

(3) THE NEED FOR THE HARMONIZATION OF MARGIN REQUIREMENTS BETWEEN THE SECURITIES AND COMMODITIES MARKETS; AND

(4) THE NEED FOR A CONTINGENCY PLAN IN THE EVENT OF ANOTHER PRECIPITOUS DROP IN THE MARKET; COORDINATION BETWEEN THE FED AND THE REGULATORS

RATHER THAN AD HOC DECISION-MAKING IN THE MIDST OF A CRISIS IS NEEDED.

ALTHOUGH THE BRADY COMMISSION CONTAINS SEVERAL RECOMMENDATIONS THAT MERIT THOUGHTFUL CONSIDERATION BY THIS COMMITTEE AND THE WITNESSES WHICH WILL APPEAR BEFORE IT, I BELIEVE THAT THE RECOMMENDATION THAT THE FED BE INVESTED WITH SUPER REGULATORY POWERS IS UNWARRANTED, UNNECESSARY AND UNWISE. THE GRANT OF SUCH POWER TO THE FED WOULD GIVE IT ALMOST ABSOLUTE POWER TO CONTROL THE ECONOMIC DESTINY OF THIS COUNTRY. I FOR ONE AM NOT WILLING TO CEDE SUCH AUTHORITY TO THE FED. I BELIEVE THAT CONGRESS SHOULD PLAY THE CENTRAL ROLE IN DEVELOPING THIS NATION'S ECONOMIC POLICY.

CAN YOU IMAGINE WHAT CONGRESSIONAL OVERSIGHT OF THE FED WOULD BE LIKE? AT PRESENT, IT APPEARS VIRTUALLY NON-EXISTENT. HAS ANYONE FROM THIS COMMITTEE EVER GOTTEN A TIMELY ANSWER, LET ALONE A STRAIGHT ANSWER, FROM THE FED WHEN YOU ASK A QUESTION TO A MEMBER OF THE FED?

THE EVENTS OF OCTOBER 19TH AND 20TH DO REVEAL THAT GREATER AND MORE FORMAL MEANS OF COORDINATION BETWEEN PARTICIPANTS IN THE COMMODITIES AND EQUITIES MARKETS AND THEIR RESPECTIVE SELF-REGULATORY AND FEDERAL REGULATORY AGENCIES ARE NEEDED. FOR THOSE MEMBERS AND STAFF WHO WERE IN VIRTUALLY CONSTANT COMMUNICATION WITH THE SEC AND THE NEW YORK STOCK EXCHANGE ON OCTOBER 19TH AND 20TH, MANY OF THE PROBLEMS ON THOSE DAYS WERE CAUSED BY A LACK OF KNOWLEDGE ABOUT TRADING ACTIVITY IN THE COMMODITIES MARKETS AND THE FED'S DECISIONS ABOUT PROVIDING LIQUIDITY IN THE MARKETPLACE. THIS LACK OF KNOWLEDGE FUELED SPECULATION AND RUMOR WHICH IN TURN HEIGHTENED THE PANIC ATMOSPHERE IN NEW YORK AND WASHINGTON. CLEARLY, THERE WAS NO COORDINATED GAME PLAN TO DEAL WITH THE SITUATION WHICH DEVELOPED DURING THE WEEK OF OCTOBER 19TH. INSTEAD, THE AD HOC DECISIONS OF EXCHANGE OFFICIALS IN NEW

YORK AND CHICAGO AND AT THE FED HAD TO SUFFICE. LUCKILY, THESE GENTLEMEN MADE THE RIGHT DECISIONS. SUCH UNCOORDINATED AND *AD HOC* DECISIONMAKING CANNOT CONTINUE BECAUSE IF IT DOES, THEN CONGRESS WILL BE FORCED TO ACT. THE MESSAGE TO MARKET PARTICIPANTS AND FEDERAL REGULATORS SHOULD THEREFORE BE CLEAR: "IF YOU DON'T GET YOUR HOUSES IN ORDER, THEN WE'LL DO IT FOR YOU." WHILE CONGRESSIONAL INTERVENTION IN THIS AREA MAY BE THE LEAST DESIRABLE SOLUTION, IT MAY PROVE POLITICALLY IRRESISTABLE IN THE FACE OF INACTION BY THOSE PROPERLY CHARGED WITH THE REGULATION OF OUR FINANCIAL MARKETS.

The CHAIRMAN. Senator Dixon.

OPENING STATEMENT OF SENATOR DIXON

Senator DIXON. Mr. Chairman, I am pleased to be here this morning as the Banking Committee begins its examination of the factors that led to last October's market break.

It is appropriate that our lead-off witness for these important hearings is our distinguished former colleague, the Chairman of the Presidential Task Force on Market Mechanisms, Senator Nick Brady.

He and his fellow members performed a real public service in my view, and I agree with much of the analysis in the task force's report.

At the outset, however, I think it is very important to put the report in context. The President directed the task force to review relevant analysis of the current and long-term financial condition of the Nation's security markets, identify problems that may threaten the short-term liquidity or long-term solvency of such markets, analyze potential solutions to such problems that will both assure the continued functioning of free, fair, and competitive markets and maintain investor confidence in such markets, and provide appropriate recommendations.

In response to this charge, the Brady report focused on, and I quote, "individual market places and the interrelationship of existing market mechanisms, including the instruments traded, the strategies employed, and the regulatory structure." The mandate of the task force was not to focus on the root causes of the downward pressure on the equity market, and the report considers these issues only very briefly.

The task force followed its mandate. But this committee's charge is much broader. If we are to make any sense of the Brady report, the preliminary report of the General Accounting Office, and the other reports that will soon follow, we must keep in mind the macroeconomic and other factors that actually triggered the crash.

As we examine possible changes in market mechanisms, we need to keep carefully in mind the fact that analysts and economists had been predicting for some time that the market was overvalued and that a significant correction was overdue. After all, in recent years, the United States has been generating the largest budget and trade deficits in its history. The United States is now a major debtor nation.

In addition, interest rates were rising, and Congress was acting to make takeover activity tougher and takeover stocks help lead the run-up in market prices. In the fact of these fundamentals, the question it seems to me is not why the market crashed, but why it was able to ignore the fundamentals for so long.

That leads to a question that I hope this committee will examine in some detail. That is, if the economic fundamentals lead the markets to conclude that they are overvalued, is there any kind of change in market mechanisms that can avoid the correction or even spread it over a significantly longer period of time?

Even were it possible, should we ever attempt to interfere with the market's ability to reach the price levels dictated by the economic fundamentals?

I would note that the stock market on October 19 fell about the same amount that the market fell in 1929. The only major difference is that in 1929, it took 2 days instead of 1.

We live in an increasingly information-intensive computerized age. Everything seems to happen faster than it used to. Given these facts, we need to consider very carefully whether we should act to fully or even partially close the gates to our markets, even though only on a temporary basis, if the result is simply to prevent people from acting on changes in economic fundamentals.

This committee also needs to consider very carefully the most fundamental conclusion of the Brady report, one that I think simply cannot be challenged, which in the words of the Brady report itself is that "from an economic viewpoint, what have been traditionally seen as separate markets, the market for stocks, stock index futures, and stock options, are in fact one market."

This is a conclusion that GAO in its report also endorsed, stating that "the futures and securities markets have become linked." I strongly agree with that view and indeed I would take it a step further. I think the world equity and future markets are increasingly linked. The Brady report itself makes this point in a very compelling way. All through its narrative on the market activity last October are comments on the parallel actions that took place in markets around the world. In fact, one of the Brady staff studies is entitled "The Global Bull Market." It is increasingly one market worldwide, and we therefore cannot afford to ignore the international implications as we consider which actions might be appropriate to take.

I don't want to take a lot of my colleagues' time to further elaborate on this point. It is almost a truism. However, I would like to cite one example that demonstrates the international market links.

On October 20, 1987, the futures contract on the Treasury bill on the Chicago Board of Trade went up to the limit and trading was halted. That is, it hit a daily price movement limit that was preestablished by the Board of Trade. As a direct result, the Treasury bond futures contract at the London International Financial Futures Exchange traded 47,082 contracts. This is almost eight times its normal volume of about 6,000 contracts daily.

What this means is that the Banking Committee cannot consider changes in U.S. market mechanisms without considering their impact on other global markets. Acting in disregard of this point could well lead to changes that will not prevent future market breaks, but which would move substantial trading volumes and perhaps free world financial leadership away from our shores to foreign markets.

I have only touched on a couple of major issues this committee must consider at today's hearing and our subsequent hearings on last October's market break. I have heard it said that we should act quickly in order to have something in place to prevent a future market crash. I can't think of anything worse, Mr. Chairman, however, than acting too hastily to address a perceived short-term problem at potential terrible long-term cost to our own financial markets.

We should take those acts warranted by the evidence, but we should not act without having a very good idea of the consequences, including the international consequences of any action we might take. To do otherwise, Mr. Chairman, in my opinion is to risk solving one problem by creating a new one that is even more serious.

I thank the Chair.

The **CHAIRMAN**. Thank you, Senator Dixon.

Senator Hecht.

Senator **HECHT**. Thank you, Mr. Chairman. I will not belabor what other people have said, because I too feel we should proceed very, very, very cautiously.

I do want to remind the committee that during this panic, every buy order was executed. Every sale order was executed. And until such time as we have positive evidence that we should be acting, I think we should adopt a very cautious approach.

The **CHAIRMAN**. Thank you, Senator Hecht.

Senator Sasser.

OPENING STATEMENT OF SENATOR SASSER

Senator **SASSER**. Thank you, Mr Chairman.

Mr. Chairman, I want to join with my colleagues in welcoming our former colleague, Senator Brady, before us today. I am delighted to see that Senator Brady continues to render yeoman service in the public interest, and I think he has certainly done so with this report that he has compiled and which we are going to hear about today.

Mr. Chairman, hopefully the inquiry we begin today will help us better understand our financial markets so that this committee can act responsibly to prevent another disastrous stock collapse, if that is possible.

Now, I will echo the comments made by my other colleagues, that this is not going to be an easy process. In my view, it is not going to be a quick process. A review of history will indicate that following the stock market collapse of 1906, it took 7 years for Congress to respond and establish the Federal Reserve system. And following the crash of 1929, it took quite a few years for Congress to enact the Securities and Exchange Acts and Glass-Steagall Acts and also to establish the Federal Deposit Insurance Corporation.

Now, I am not saying that we need to do anything so drastic as that legislation that came forward in the early 1930's, or that it will necessarily take us as long to respond as it did at the turn of the century or in the 1930's. But I don't think that we are on the verge at all of a quick solution to what is an enormously complex problem.

I will say, though, that I think one of our first concerns should be the treatment of individuals in the market. The numerous reports that have been written on the crash resound with descriptions of discrimination against small investors.

The Brady Commission tells us that a few large institutions drove the market down in the first place. The computer systems were clogged with the orders of the large investors and this prevented small investors from executing their trades. And we hear, that brokers protected their own positions before they complied with the orders from individuals.

The result was that the individual investors that own 65 percent of America's common stock were burned. And we are not talking about people who can necessarily afford the loss.

According to a report of the General Accounting Office, 40 percent of these investors earn less than $25,000 per year. Indeed, the story was told of a hotline set up after the crash by North American Securities Administrator Association. The operators who answered that hotline reported numerous cases of investors who lost their entire savings that were destined for downpayments on homes, for retirement, for children's education.

The North American Securities Association took almost 7,000 calls on this hotline in the 4 weeks following the crash. Later, they learned to their shock from the telephone company that this hotline turned away 103,000 calls from individuals who simply could not get through because the phone line was too clogged.

The treatment of small investors obviously has implications far beyond their losses. If individuals suffered at the hands of large institutions, then surely as night follows day, our capital markets are going to suffer to a great extent.

The equity markets are the principal means by which business raises funds for growth and jobs, and broad-based ownership of stocks brings stability. It brings a longer-term growth outlook to the markets.

So the impression left by the crash, that individuals don't get a fair shake in our capital markets, is indeed a dangerous one for the long-term growth and stability of this economy.

Senator Brady has suggested that individuals be given preference over institutional investors in periods of order imbalances. I subscribe to that view and I am looking forward to hearing from Senator Brady's testimony this morning as to how that can be done.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Sasser.

Senator Bond.

OPENING STATEMENT OF SENATOR BOND

Senator BOND. Thank you very much, Mr. Chairman.

I am very pleased that we are beginning our hearings on the October stock market crash with such distinguished witnesses before us today, and I particularly commend you for waiting to hold these hearings until the various reports of the committees had come in.

We are dealing with complex and sensitive issues here, and there is no reason to rush to judgment or to sensationalize them. We should note, by the way, that this committee did not have any hearings about why the Dow Jones Industrial Average was climbing so high last summer. I am very dubious of legislative attempts to set prices or prevent market crashes. We can't outlaw the human greed or wishful thinking that bid up the stock market to such outrageously high levels, and we will irreparably damage the markets if we try to do so.

As a matter of fact, I believe that the trigger that set off the disintegration of investor confidence, which began the week of October 12, was actually pulled on Capitol Hill. It became evident that we in Congress were unable to deal with the Federal budget deficit and were considering protectionist trade legislation. Then the House Ways and Means Committee reported out a punitive antitakeover tax bill which caused panic.

In addition to correcting the underlying economic problems which confront us and which set off the crash, however, what we should be looking at in these hearings is what we can do to ensure that the markets function, that trades can be executed and cleared.

The Brady Report paints a frightening picture of a market perilously clear to total breakdown. It describes specialists unable to maintain orderly markets in New York Stock Exchange stocks and OTC markets which broke down almost completely.

The focus of our efforts should be to ensure that our financial markets have the capacity to process the large numbers of trades caused by the growing influence of institutional investors.

We need to come to terms with the fact that a few large institutions, pursuing aggressive trading strategies, can move the market in ways that were unheard of 10 years ago. In this new environment, we need to have a regulatory structure that can protect the small investor by ensuring adequate disclosure. And we need to ensure that the markets are able to handle large numbers of trades very quickly.

I have been told by retail stockbrokers in Missouri that their business has been off by as much as one-third since the crash. Small investors just don't feel comfortable investing any longer in a market that is as volatile as this one. Small investors know that they can be trampled when the elephants run for the doors.

The majority of stock is still held by individual investors, although much of it may be professionally managed. If Americans decide that there are better things to do with their money than invest in a chaotic, volatile market, there will be serious consequences for job creation and capital formation in this country. No one should try to protect investors from bad investment decisions, but we should try to ensure that we have a market where the trades will be executed and the risks of investing are adequately disclosed.

The Brady Commission's conclusion that the financial markets actually function as one market is compelling. We should have a regulatory structure that reflects this reality. I also believe that their suggestion that circuit breakers are necessary is quite correct.

The fallacy of portfolio insurance should be self-evident by the pragmatic test which it failed on October 19. We should let it die a natural death. But we here should consider what may be necessary to ensure the liquidity and capital in the markets in the future to protect them from schemes dreamed up by the rocket scientists of tomorrow.

Sensible regulation of the financial markets should not destroy them, but rather allow them to function honestly and efficiently. Senator Brady has selflessly donated his time and energy to work on this problem. We should pay careful attention to his recommendations.

I agree with most of them and believe that his report should be the foundation for any committee action. I look forward to the testimony.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Bond.

Senator Wirth.

OPENING STATEMENT OF SENATOR WIRTH

Senator WIRTH. Thank you, Mr. Chairman.

Mr. Brady, thank you for being here. I agree with everybody who said that we ought to exercise caution, care, perspective, no rush to judgment and so on. But I would hope that we also in the process don't get paralyzed.

It seems to me, Mr. Chairman, that there is a consensus that has emerged from all the statements this morning and from all the reports that we have heard. That is, that there is one market. We have a greater need for rationalization and move away from the balkanized regulatory structure. Everybody seems to suggest that is the case.

Second, that we have an increasingly globalized market, and that demands that we examine our own mechanisms so that we assure our competitive position in this globalized market.

And, third, that we need to protect the small investor. That is out there in everybody's speeches. That is in all the reports that have been done by you and GAO and, I gather, by the SEC this afternoon and by the Federal Reserve earlier

So the question is, not to rush to judgment, but what are we going to do about it? We have got these three issues out there. What are we going to do about it?

Senator Graham and I converted the New York Federal Reserve's President, Jerry Corrigan's, proposal into a legislative proposal to call for a greater rationalization of our regulatory operations. It seems to me that that makes even greater sense today, based upon the report that you have done, Mr. Brady, and the others than it did before. And I would hope, Mr. Chairman, that we would find a way of pursuing that.

Then the question is how to go about doing that. We have before us as well the imperative to move on legislation related to banking powers, Glass-Steagall and so on, and it seems to me that there is room here for agreement of looking at some expanded bank powers, but in a sense of limited, maybe not dissimilar from what Senator Garn had suggested 3 or 4 years ago.

Second, that we look at this kind of rationalization process of our regulatory structures that everybody seems to agree has to be done.

And, third, to look at the payments mechanism, an issue that nobody talks about, but appears to be very critical and important.

I think that we have the opportunity here, Mr. Chairman, to put these issues together in a good piece of legislation that we could find a pretty broad consensus on, and I would hope that we could move, not get paralyzed by a lot of the problems that exist from each one of the constituencies, but to move right ahead. I look forward to the potential of doing that this winter and early spring, Mr. Chairman.

Mr. Brady, again thank you for being here.

Thank you, Mr. Chairman.

The **Chairman**. Thank you, Senator Wirth.

Senator Heinz.

OPENING STATEMENT OF SENATOR HEINZ

Senator **Heinz**. Mr. Chairman, first I want to commend Nick Brady and his staff for having produced what I think is a remarkable report. As I was listening to Senator Bond remark on whether or not this committee would have investigated a rising market the way we did a falling market, I couldn't help but think I wish we had understood the mechanisms that were accelerating the market to an unsustainable level so that whether we investigated it or not, we were just smarter about the forces that brought about an overbalancing of the market that caused inevitably a crash, a debacle as we saw on October 19.

I want to say, Nick, that I think you have in your report issued to both Congress and the administration a challenge that can't be ignored. And I say that because I find your conclusions to be anything but revolutionary or radical. I view them as common sense.

As I understand your report, you found that not only was there an enormous amount of volatility, but that that volatility has tended to erode public confidence in our markets. You have suggested that the vast array of security and derivative security products should be subject to some kind of generally consistent, coordinated oversight and regulation. You didn't say unitary, you didn't say identical, but coordinated and consistent is what I take away. Scarcely a radical notion.

And you have made the point that what was really happening on October 19 and thereafter is that technologically drive, computer-driven actions and decisions were taking place faster than the human mind could follow, let alone think, let alone intelligently decide. So to my mind, that is a compelling call for careful, thoughtful action, not careful, thoughtful procrastination.

I think that your proposal to harmonize margins, which is embodied in legislation I introduced within about a week or 10 days after October 19, giving the Federal Reserve the authority to set and harmonize margins, is necessary. Having a unified clearing mechanism that works among the markets is something that will benefit all the markets. The interruptions, the delays, the inability of the markets to cross-clear clearly is the opposite of having a better market system. And the issue of regulating securities products consistently equally seems to me to be common sense.

I join Senator Wirth, if I understand him correctly, Senator Bond, and Senator Riegle, in saying that we serve no purpose by failing to take those actions on which we can reach a reasonable consensus. I think there is much in your report that most of us can agree upon. And the vehicle that soon presents itself to this committee, the so-called Glass-Steagall reform, Proxmire-Garn, or other versions of it that have been referred to offers an excellent vehicle for including those necessary consensus elements that I think in large part you have put your finger on. I commend you and I thank you.

The CHAIRMAN. Thank you, Senator Heinz.

Senator Graham.

OPENING STATEMENT OF SENATOR GRAHAM

Senator GRAHAM. Thank you, Mr. Chairman.

I would like to also express my appreciation to Senator Brady for the outstanding contribution he has made in clarifying thought and outlining options for action on a very difficult and important issue.

I would like to summarize my statement by saying that I particularly appreciate the systemic approach which Senator Brady has given us and the futuristic orientation in helping us to probe the question of what do we want the future to look like and what steps do we take today?

I would like to focus on one issue and that is the issue of globalization. I am associating myself with remarks made by several of the Senators previously, particularly those by Senator Wirth.

I come out of an experience in State government where, not too many years ago, States used to feel that they would compete for economic expansion by offering the lowest environmental standards, the lowest taxes, the lowest levels of public service, and that was the way you attracted the most business. There was the sense that the States had no control over their economic destiny and therefore were forced to compete in a world of lowest common denominator.

I would hate to feel that we are now about to adopt the position that the United States of America, the great economic power, has lost its economic sovereignty and must compete to the lowest common denominator in terms of the basic standards in which we provide a structure and regulatory system for economic matters that directly touch the lives of all of our citizens.

I would hope that in the consideration of your report and the other testimony that we will receive, that we will probe the question of just what are the limits of the U.S. economic sovereignty in the conditions of the global economy and how far should we go in utilizing the perimeters that are available to us in terms of protecting the interest of our citizens and in protecting the stability and the confidence and credibility of the economic engine upon which the entire free world depends.

Senator Brady, thank you for helping us to move forward on those issues.

[The complete prepared statement of Senator Graham follows:]

SENATOR GRAHAM'S OPENING REMARKS

GOOD MORNING, MR. CHAIRMAN, MR. BRADY, DISTINGUISHED MEMBERS OF THE COMMITTEE:

UPPERMOST IN OUR MINDS AS WE EXPLORE WHAT HAPPENED LAST OCTOBER AND WHAT THAT TAUGHT US ABOUT OUR FINANCIAL SYSTEMS, SHOULD BE THE HEALTH OF THOSE SYSTEMS -- THE WELL-BEING OF THE USERS OF THOSE SYSTEMS -- PARTICULARLY THE INDIVIDUAL INVESTORS.

WE KNOW THAT THE BASIS OF FEDERAL SECURITIES REGULATION IS THE BELIEF THAT INFORMED INVESTORS MAKING DECISIONS ON "GOOD" INFORMATION ENJOY A UNIFORM LEVEL OF PARITY AND ACCURACY. WE NEED TO ASSURE THAT THAT BELIEF RESTS ON A SOLID FOUNDATION OF FAIR TREATMENT AND EQUAL ACCESS.

WE ALSO NEED A HEIGHTENED SENSITIVITY TO COHERENT TREATMENT ACROSS VARIOUS TYPES OF SECURITIES AND HOW THEY ARE HANDLED. THE CURRENT DIFFERENCES BETWEEN THE HANDLING OF STOCKS ON THE NEW YORK EXCHANGE AND OF FUTURES IN THE CHICAGO EXCHANGES COME TO MIND.

THE SUN NEVER SETS ON THE GLOBAL SECURITIES MARKET. WHATEVER WE DO MUST TAKE THE CONTINUOUS ACTIVITY WORLDWIDE INTO ACCOUNT. FOR EXAMPLE: I QUESTION THE SUGGESTION THAT THE UNITED STATES LIMIT TRADING TO A SET SPECTRUM OF RISING AND FALLING PRICES SINCE SUCH A RESTRICTION WOULD NOT APPLY INTERNATIONALLY AND INVESTORS COULD SIMPLY GO AND TRADE ELSEWHERE.

THE RECOMMENDATION OF A "SUPERAGENCY" TO FILL IN THE REGULATORY GAPS IN THE CURRENT SYSTEMS IS A GOOD IDEA. OUR FINANCIAL SECURITIES SYSTEMS MUST BE CHARACTERIZED BY CLARITY, EQUAL ACCESS, UNIFORMITY -- AND AN ABSENCE OF LOOPHOLES AND MAJOR SURPRISES.

I LOOK FORWARD TO HEARING MR. BRADY'S TESTIMONY TODAY. I'M SURE IT WILL BE THOUGHTFUL AND ENLIGHTENING AND PROVOCATIVE AND WILL HELP US TO ACHIEVE THE BALANCED, COMPREHENSIVE SYSTEM WE NEED.

The **CHAIRMAN**. Thank you, Senator Graham.

Senator Gramm.

OPENING STATEMENT OF SENATOR GRAMM

Senator **GRAMM**. Thank you, Mr. Chairman.

Let me join everybody else in thanking you for holding the hearings and having Nick Brady here to present the report to us.

In a lot of ways, it seems to me that our situation is sort of like an old farmer that has a goose, and this goose has been in the wonderful habit of laying golden eggs. And so the farmer comes, he burns down the goose house, he lets his dog loose to chase the goose around the yard, he quits feeding the goose, pumps out the pond, and one day the goose doesn't lay a golden egg.

So he calls up the veterinarian and says, you need to get out here. Something is wrong with this goose. You may need to operate on this goose.

Now, Mr. Chairman, there may be something wrong with the goose, but when you are fighting the coop burning down and the pond being pumped out, the dog chasing you, and you are not getting fed regularly, and you survive all that, and you just miss one day laying a golden egg, it's a pretty good goose. [Laughter.]

I would suggest that we begin by rebuilding the coop, we pump water back in the pond, we start feeding the goose again, we either shoot the old dog or leash him up, and then we find out where the goose broke down. Maybe he wasn't running quite fast enough to stay ahead of the dog, and so we may want to check out those legs and the lung capacity. We may want to see if there is some problem in the laying process.

But I am struck by the fact, and I think your report concludes—you number your pages funny—but it concludes in the conclusion that, in essence, we had the Great Depression not because the stock market collapsed, but because of the monetary policy of the Federal Reserve, because of the massive tax increase, and because of the Smoot-Hawley Tariff.

I have to be struck by the fact that all three of these factors were present in October 1987. The basic monetary base had grown at less than half the rate the year before. We were facing all kinds of proposals for tax increases, including a punitive tax on the transfer of ownership in the equity market, and everybody is aware that protectionism has been all the rage here in Washington, imperiling the whole economic recovery of the Western World in the postwar period.

So I for one am willing to take a very close look at this goose, open up his mouth, look down his throat, check out his craw—I should say her. And if something needs to be done to the goose, I want to do it. But I would like to remind people that while we are in the veterinarian business with regard to this goose as members of this committee, that we are in the farmer business as it relates to this goose as members of the Senate, and that the problem really is more a problem of the coop and the pond and the feeding and the dog, and we ought to be looking at those things as well.

Final point: This is a wild goose and can fly. And I submit that while currently—and I thank the Lord for it—we have the best environment on Earth for the care and feeding of these geese that lay the golden eggs in the American equity market, and people come from all over the world to invest here, it is not beyond my imagination to believe that we could do some things that would be so counterproductive and so stupid as to induce this goose to fly off to some other land that would promise no dogs, better food, better care, plenty of straw.

And since a transaction is recorded in Tokyo 35 seconds after it occurs in New York, I suppose that a transaction can be recorded in New York 35 seconds after it occurs in Tokyo. And I think we have to keep all these things in mind as we look at how we can help this goose do a better job; we need to keep in mind the environment.

Thank you, Mr. Chairman.

The **Chairman**. Senator Gramm, thank you for the most useful barnyard fable that this committee has had in the 30 years that I have sat on the committee. [Laughter.]

You are a great fabulist.

Senator Sanford.

OPENING STATEMENT OF SENATOR SANFORD

Senator **Sanford**. Well, I want to thank Senator Brady for his excellent work and I certainly view him as one of the Nation's experts on geese. I think he understands that the goose here has been misbehaving in spite of the hen house and in spite of the pond and in spite of the fact that the dog has been relatively chained up.

I can remember when some of the critics of this report were bragging and pointing to the goose—if that is the stock market—and bragging on how strong this country really was. Don't worry about the deficit, don't worry about the slumping in the industrial manufacturing; look at the goose. Everything must be all right.

Well, I think you have looked at it in a very intelligent way, and I commend you, and I think it is an outstanding report. I feel that it is going to get great attention.

Mr. Chairman, I am not going to read this learned statement that my staff has prepared, but I would like to put it in the record.

I am greatly concerned about the volatility of the market and especially the disadvantage of the small investor in such a market and, to use your expression, aggressive trading-oriented investors that have indeed seemed to control the market movements, and something does need to be done about it, and we can indeed chain up that dog.

I think, too, that you have made a point that has to be looked at carefully. That is that the futures and equity and options markets are all inextricably linked and they do function as one market, and we need to concern ourselves with that. I want us to be cautious and I certainly want us to be responsible, but to elaborate on what Senator Wirth said, I don't think we ought to be afraid to move. I think we can be cautious and responsible, but we need to be bold. Indeed there was something wrong with the markets when they were rising, and there is something wrong when they are now going through this period of volatility.

I thank you very much. I look forward to your testimony.

[The complete prepared statement of Senator Sanford follows:]

OPENING STATEMENT OF SENATOR TERRY SANFORD
HEARING ON THE BRADY COMMISSION REPORT
FEBRUARY 2, 1988

MR. CHAIRMAN, I COMMEND YOU

. FOR CALLING FOR THESE HEARINGS AND I THANK NICK BRADY FOR APPEARING BEFORE US THIS MORNING. I WOULD ALSO LIKE TO THANK AND COMMEND SENATOR BRADY FOR THE EXCELLENT JOB HE, THE MEMBERS OF HIS TASK FORCE, AND ITS STAFF DID IN PREPARING THEIR REPORT ON MARKET MECHANISMS. THE REPORT CONTAINS A WEALTH OF HELPFUL AND IMPORTANT INFORMATON THAT SHOULD FORM A SOLID BASE FROM WHICH THE COMMITTEE CAN WORK AS IT CONSIDERS PROPOSALS TO REDUCE VOLATILITY AND INCREASE THE FAIRNESS IN OUR MARKETS.

I AM HOPEFUL THAT THE COMMITTEE WILL LOOK BEYOND SOME INITIAL PRESS REPORTS HAVE DISMISSED THE BRADY REPORT BECAUSE CERTAIN CRITICS DO NOT LIKE ITS CONCLUSIONS REGARDING CIRCUIT BREAKERS OR OTHER EFFORTS TO BRING GREATER STABILITY TO THE MARKETS. RATHER, I THINK THE REPORT YOU HAVE PUT BEFORE US, SENATOR BRADY, IS A VERY SERIOUS, SIGNIFICANT AND IMPORTANT DOCUMENT THAT DESERVES THE FULL AND FAIR CONSIDERATION THAT I AM CONFIDENT THE COMMITTEE WILL GIVE IT. THE RECOMMENDATIONS THAT IT SETS FORTH CERTAINLY POINT US IN THE RIGHT DIRECTION IN FINDING THE PROBLEMS THAT MUST BE ADDRESSED.

I SHARE THE TREMENDOUS CONCERN EXPRESSED BY MY COLLEAGUES FOR THE FUTURE OF OUR FINANCIAL MARKETS. THE UNPRECEDENTED MARKET VOLATILITY WE HAVE SEEN RECENTLY MAY WELL HAVE FUNDAMENTALLY CHANGED OUR MARKETS. SOME OF THE INVESTMENT THEORIES RELATING TO PROGRAM TRADING, INDEX ARBITRAGE, AND PORTFOLIO INSURANCE MAY HAVE FALLEN BY THE WAYSIDE. WE MUST QUESTION WHETHER A MARKET THAT CAN FLUCTUATE AS WILDLY AS OURS HAS SINCE OCTOBER, A MARKET TIED TO TRADING IN FUTURES AND OPTIONS, A MARKET THAT SO DRAMATICALLY INFLUENCES AND IS INFLUENCED BY FOREIGN MARKETS REMAINS A MARKET IN WHICH ALL TYPES OF INVESTORS WILL PARTICIPATE.

I AM VERY CONCERNED THAT THE VOLATILITY OF THE MARKET AND THE PERCEIVED ADVANTAGE THAT LARGE INVESTORS WHO USE PROGRAM TRADING HAVE WILL DISCOURAGE MANY INVESTORS FROM PARTICIPATING. I BELIEVE THAT ONE OF THE KEY THINGS WE MUST FOCUS ON THROUGHOUT THESE HEARINGS IS THE TREATMENT OF THE SMALL INVESTOR. INDEED, ONE OF THE MOST DISTURBING ITEMS TO EMERGE FROM THE BRADY REPORT WAS TO DEGREE TO WHICH A HANDFUL OF SO-CALLED "AGRESSIVE TRADING-ORIENTED INVESTORS" WERE ABLE TO VIRTUALLY CONTROL MAJOR MOVEMENTS IN THE MARKET.

I AM ALSO CONCERNED THAT THE MECHANICS AND REGULATORY OVERSIGHT OF THE MARKET AS WE HAVE KNOWN IT FOR THE PAST FIFTY YEARS MAY BE INADEQUATE TO DEAL WITH THE VOLUME, VOLATILITY AND INTERNATIONALIZATION OF THE CAPITAL MARKETS THAT HAS BECOME SO EVIDENT IN RECENT WEEKS.

I BELIEVE THAT THOSE, SUCH AS SENATOR BRADY, THAT HAVE CALLED FOR SIGNIFICANT CHANGES IN THE REGULATION OF OUR

FINANCIAL MARKETS MAY INDEED BE CORRECT. FUNDAMENTAL ISSUES RELATING TO THE CAPITAL ADEQUACY OF SECURITIES MARKET PARTICIPANTS, PARTICULARLY SPECIALISTS; THE LACK OF COORDINATION OF REGULATION OF OUR FINANCIAL MARKETS; THE VULNERABILITY OF THE MARKETS TO COMPUTER TRADING; AND THE IMPACT OF THE FUTURES MARKETS, WITH THEIR GREATER DEGREE OF LEVERAGING, MUST ALL BE CAREFULLY EXAMINED. WE MAY NEED TO RECONSIDER THE DECISIONS MADE REGARDING THE CFTC'S ROLE IN REGULATING FUTURES CONTRACTS, OPTIONS ON FUTURES CONTRACTS AND FOREIGN CURRENCIES; THE ABILITY TO SET HIGHER MARGIN REQUIREMENTS; THE POLICY OF ASSIGNING MARKET-MAKING RESPONSIBILITY TO SINGLE SPECIALISTS; AND NUMEROUS OTHER DECISIONS THAT MAY HAVE RESTED ON ASSUMPTIONS THAT MAY NO LONGER BE VALID.

INDEED, THE CLEAREST MESSAGE THAT I READ FROM THE BRADY REPORT AND FROM OTHER REPORTS EXAMINING THE STOCK MARKET CRASH IS THAT OUR EQUITY, FUTURES AND OPTIONS MARKETS ARE INEXTRICABLY LINKED AND FUNCTION AS ONE MARKET. I THINK WE NEED TO CONSIDER VERY SERIOUSLY THE NEED TO REGULATE THEM AS ONE MARKET, OR CERTINALY THE NEED TO BETTER COORDINATE THE REGULATORY EFFORTS OF THE SEC, THE CFTC AND OUR SELF-REGULATORY ORGANIZATIONS.

WHILE CHANGES MAY NEED TO BE MADE, I ALSO THINK IT IS IMPORTANT THAT WE LISTEN CAREFULLY TO THE REPORTS FROM OUR SELF-REGULATORY ORGANIZATIONS AND FOCUS ON WHAT THESE INSTITUTIONS CAN DO WITHOUT LEGISLATIVE CHANGES, AT THE SAME

TIME THAT WE CONSIDER WHAT ALTERATIONS MAY NEED TO DONE HERE IN THE CONGRESS.

I LOOK FORWARD TO THESE HEARINGS AND LOOK FORWARD TO WORKING WITH MY COLLEAGUES TO DETERMINE AN APPORPRIATE PATH TO RESTORE CONFIDENCE IN OUR MARKETS.

THANK YOU.

The **Chairman**. Thank you, Senator Sanford.

Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman.

When I heard Senator Phil Gramm talk, I thought I had stumbled into the Agriculture Committee. That is a terrible committee to be considering any of these matters. [Laughter.]

I have a statement here, and I would submit it for the record.

I would just say a couple of words, if I might. I want to join in congratulations to Senator Brady for yet one more contribution that he has made to our Nation's welfare. I don't think anybody would ever characterize Nick Brady as a wild-eyed bomb-thrower. And when he recommends action, I think it comes from one that knows, that is not out to undermine our free competitive system, and any recommendation he makes, we ought to very, very carefully consider.

I join those who think we ought to move ahead. Somebody mentioned there were no actions taken for 7 years after the Great Depression. That horrified me.

The two issues that most concern me, Mr. Chairman, are how to preserve the individual's confidence in the market and, two, how to maintain our market's international competitive position.

So I will be listening intently to the recommendations on those matters.

Thank you very much.

[The complete prepared statement of Senator Chafee follows:]

SPEECH BY
SENATOR JOHN H. CHAFEE
TO
SENATE BANKING COMMITTEE
ON THE MARKET CRASH
(FEBRUARY 2, 1988)

MR. CHAIRMAN. I COMMEND YOUR HOLDING THESE HEARINGS SO WE ON THE COMMITTEE CAN LEARN MORE ABOUT THE MARKET COLLAPSE AND DISCUSS WAYS TO SEE IT DOES NOT HAPPEN AGAIN.

IN CONSIDERING SOLUTIONS, WE MUST RECOGNIZE THE CRITICAL IMPORTANCE OF INDIVIDUAL INVESTORS IN HELPING FUND THIS NATION'S GROWTH. THESE INVESTORS ARE THE LIFEBLOOD OF THE STOCK MARKET. AT YEAR-END 1986, THEY OWNED 63% OF COMMON STOCKS, OR 89% WHEN PENSION FUNDS AND MUTUAL FUNDS, INVESTED ON THEIR BEHALF, ARE INCLUDED.

INDIVIDUAL INVESTORS BUY IBM BASED ON ITS FUNDAMENTALS AND THE ABILITY TO YIELD AN ATTRACTIVE RETURN. YET THE MARKET CRASH INDICATED THAT OTHER FORCES WERE AT PLAY BEYOND THEIR CONTROL. INDEX ARBITRAGEURS CLOGGED THE ORDER SYSTEM WITH THEIR TRADES, WHICH WERE UNRELATED TO THE PRICES OF INDIVIDUAL STOCKS. PORTFOLIO INSURANCE GAVE INSTITUTIONAL MANAGERS THE ILLUSION OF PRICE PROTECTION AND THEY RESPONDED BY BIDDING UP THE STOCK MARKET BEYOND ITS UNDERLYING ECONOMIC VALUE. WHEN THE BUBBLE BURST, PANIC SELLING RESULTED AND INDIVIDUALS WERE ESSENTIALLY SWEPT AWAY. VALUE DISINTEGRATED. ACCORDING TO THE BRADY COMMISSION: "ONLY 3 PERCENT

OF THE TOTAL SHARES OF PUBLICLY TRADED STOCK IN THE U.S. CHANGED HANDS DURING THIS PERIOD, BUT IT RESULTED IN THE LOSS IN STOCK VALUE OF $1 TRILLION."

AND WHERE IS THE RATIONALITY? IBM'S STOCK PRICE CLOSED AT $135 ON OCTOBER 16 AND $103 1/4 ON OCTOBER 19, BUT NO-ONE CAN TELL ME THAT IBM'S PERFORMANCE AND PROSPECTS DECLINED BY 24% IN THOSE FEW DAYS.

THIS IS IMPORTANT, BECAUSE IF INDIVIDUALS' INVESTMENTS NO LONGER RELATE TO THE COMPANY THEY INVEST IN, IF THEY CANNOT REACH THEIR BROKER OR HAVE THEIR ORDERS PROCESSED IN A TIMELY FASHION, IF IT ALL BECOMES A CASINO, THEY MAY LEAVE THE MARKET. THIS WILL GREATLY DAMAGE THE ABILITY OF OUR COMPANIES TO RAISE CAPITAL AND CREATE JOBS.

ACCORDINGLY, WE MUST SEE THAT THESE NEW INSTRUMENTS AND STRATEGIES PERFORM A POSITIVE FUNCTION, THAT THEY ADD VALUE TO THE CAPITAL MARKETS AND DO NOT FRIGHTEN OFF CURRENT INVESTORS. THESE GOALS MUST BE SUPPORTED BY MARKET PARTICIPANTS, IF THEY WANT CAPITAL MARKETS TO BE FREE FROM GOVERNMENTAL INTRUSION. OTHERWISE, SOME ~~SAND IN THE GEARS~~ CIRCUIT BREAKERS WILL BE THE PRICE TO PAY TO RESTORE THE MARKET'S PURPOSE, AND ITS SAFETY AND SOUNDNESS, SO THAT INVESTORS SEE MERIT IN STAYING AROUND.

I LOOK FORWARD TO HEARING FROM ~~MR.~~ SENATOR BRADY ON THIS AND OTHER MATTERS.

The **Chairman**. Thank you, Senator Chafee.
Senator Shelby.

OPENING STATEMENT OF SENATOR SHELBY

Senator **Shelby**. Mr. Chairman, Senator Brady, I too want to welcome you to the committee and commend you on a job well done. But I believe that Senator Gramm said it for a lot of us, maybe not all of us, when he said let's watch the goose.

A lot of us here know a little about the geese, and we know that they will change flight patterns. We know that they will go where the feed is, where the environment is right for them. And it's been right for them in the United States. Maybe everything isn't right with the market. But no one, as pointed out earlier, no one that I know on the Banking Committee complained too much or had any hearings when the market was going up.

You know from your background and experience that there is risk in the market. We should always know that.

Mr. Chairman, I have a written report and I ask unanimous consent that it be made part of the record.

The **Chairman**. Without objection, so ordered.

Senator **Shelby**. In your recommendations, you talked about the need for circuit breakers, as I call them. And such mechanisms in the form of trading halts, haven't they already been adopted by the Chicago exchanges and New York exchanges?

While I believe all of us recognize the need to provide more stability in the capital markets, institutional trading halts are an artificial imposition on the market, I believe, and run counter to the market fundamental of providing a liquid investment environment. I know they provide breathing space.

But when you testify here today, I would like you to think of this, and you probably already have: Is it realistic to believe that a halt in trading can counter a meltdown caused by profound change in investor psychology that happens from time to time?

Also, as Senator Gramm pointed out, if the geese go somewhere else, if they fly to Tokyo or to Hong Kong and they start their flight patterns there and they nest there and they winter there, requiring higher margins for futures trading, would it drive investors to trade overseas? To your knowledge, is there anything being done to coordinate market practices around the world, and is it not imperative that we do this in today's type of financial markets?

Mr. Chairman, thank you.

[The complete prepared statement of Senator Shelby follows:]

STATEMENT BY SENATOR RICHARD SHELBY

HEARING ON MARKET VOLATILITY

FEBRUARY 2, 1988

MR. CHAIRMAN, I COMMEND YOUR LEADERSHIP IN SCHEDULING THIS SERIES OF HEARINGS CONCERNING THE RECENT DISTURBANCES IN THE GLOBAL CAPITAL MARKETS. WE HAVE HOPEFULLY GAINED THE BETTER PERSPECTIVE OVER THE PAST THREE MONTHS THAT WE WILL NEED TO DETERMINE SOME SOLUTIONS TO THE PROBLEMS THAT HAVE BEEN IDENTIFIED.

MR. BRADY, I WOULD LIKE TO WELCOME YOU HERE WITH US TODAY. YOU AND THE OTHER MEMBERS OF THE PRESIDENTIAL TASK FORCE HAVE DONE AN EXCELLENT JOB OF INVESTIGATING AND COMPILING A HUGE AMOUNT OF COMPLEX INFORMATION WITHIN A VERY LIMITED TIME CONSTRAINT. WHILE SUCH EFFICIENCY IN ITSELF IS COMMENDABLE, THE REPORT HAS ALSO EMERGED AS THE DEFINITIVE WORK ON MARKET MECHANISMS. WE THANK YOU AND THE OTHERS ON THE TASK FORCE FOR DEVOTING THESE PAST FEW MONTHS TO THE ANALYSIS OF AN ISSUE CRUCIAL TO ALL OF AMERICA.

THE TASK FORCE RECOMMENDS SUPERVISION BY ONE REGULATORY AGENCY OF "CRITICAL INTERMARKET ISSUES", SPECIFICALLY: CLEARING SYSTEMS, MARGINS, CIRCUIT BREAKER MECHANISMS, AND INTERMARKET INFORMATION SYSTEMS. MY INITIAL RESPONSE IS RELUCTANCE TO SANCTION ADDITIONAL BUREAUCRACY. THE EXISTING REGULATORY STRUCTURE APPEARS TO HAVE PERFORMED CAPABLY IN MONITORING THE

EVENTS OF OCTOBER AND IN PREVENTING SERIOUS REPERCUSSIONS THROUGHOUT THE INDUSTRY. THE OCTOBER CRISIS HIGHLIGHTED AREAS IN WHICH MORE SUPERVISION IS NEEDED AND THE REGULATORS CURRENTLY SUPERVISING THOSE ACTIVITIES HAVE INCORPORATED SEVERAL CHANGES. I SUPPORT GRANTING ADDITIONAL AUTHORITY TO AN EXISTING REGULATOR BUT I QUESTION THE NECESSITY OF DRAWING IN YET ANOTHER GOVERNMENT AGENCY. THE TASK FORCE SUGGESTED THAT THE FEDERAL RESERVE BOARD MAY BE BEST QUALIFIED TO ASSUME THE ROLE OF INTERMARKET REGULATOR. I LOOK FORWARD TO CHAIRMAN GREENSPAN'S RESPONSE THIS AFTERNOON.

THE TASK FORCE ALSO RECOMMENDS THE NEED FOR CIRCUIT BREAKERS. SUCH MECHANISMS, IN THE FORM OF TRADING HALTS, HAVE BEEN ADOPTED BY BOTH THE CHICAGO EXCHANGES AND THE NEW YORK STOCK EXCHANGE. WHILE I RECOGNIZE THE NEED TO PROVIDE MORE STABILITY IN THE CAPITAL MARKETS, INSTITUTIONAL TRADING HALTS ARE AN ARTIFICIAL IMPOSITION ON THE MARKET AND RUN COUNTER TO THE MARKET FUNDAMENTAL OF PROVIDING A LIQUID INVESTMENT ENVIRONMENT. TRADING HALTS ARE CONSIDERED VALUABLE FOR THE BREATHING SPACE THAT THEY PROVIDE. HOWEVER, IS IT REALISTIC TO BELIEVE THAT A HALT IN TRADING CAN COUNTER A MELTDOWN CAUSED BY A PROFOUND CHANGE IN INVESTOR PSYCHOLOGY?

THE TASK FORCE ALSO RECOMMENDS THAT MARGIN REQUIREMENTS FOR FINANCIAL FUTURES BE MADE CONSISTENT WITH THOSE CURRENTLY REQUIRED FOR STOCK PURCHASES. HOWEVER, MARGIN REPRESENTS A VERY DIFFERENT SORT OF PAYMENT IN THE TWO MARKETS. FURTHERMORE, REQUIRING HIGHER MARGINS FOR FUTURES TRADING MAY DRIVE INVESTORS TO TRADE OVERSEAS. TO YOUR KNOWLEDGE IS THERE ANYTHING BEING DONE TO COORDINATE MARKET PRACTICES AROUND THE WORLD? IN THE EVENT THAT SUCH INTERNATIONAL COORDINATION IS NOT POSSIBLE, WOULD YOU STILL RECOMMEND INCREASING MARGIN IN THE FUTURES MARKET?

THANK YOU MR. BRADY FOR YOUR EFFORTS AND FOR TAKING THE TIME TO APPEAR BEFORE US TODAY. I LOOK FORWARD TO YOUR TESTIMONY.

The Chairman. Thank you.

I think every Senator has had an opportunity to make his opening statement. You have had to listen to this for 1 hour. I imagine that compares unfavorably with the hard work you had to do on the report.

Senator Brady, your report suggests we came very close to a collapse of our financial system. A widespread failure of firms in the securities industry would have a very severe effect on our banking industry with which this committee, of course, is deeply concerned.

Senator Garn suggests you may have a statement. [Laughter.]

You have given a marvelous report that we have read, and we could go right ahead with the questions. But I think Senator Garn makes a very good point. So you have a statement; go right ahead with it.

STATEMENT OF NICHOLAS F. BRADY, CHAIRMAN, PRESIDENTIAL TASK FORCE ON MARKET MECHANISMS, NEW YORK, NY

Mr. Brady. Senator Proxmire, I have already foreshortened my statement from the written statement that I submitted to your committee, but why don't I foreshorten it some more, just to about 1 minute or 2, and then maybe we can get into the questions if that suits you.

The Chairman. Well, I am embarrassed that I went ahead. I shouldn't have done that, because your statement should be the highlight of this meeting today. Anyway, go ahead, sir.

Mr. Brady. I think actually a lot of the things that are in my statement have already been alluded to by the Senators, so I think it is entirely appropriate to foreshorten the statement and I will do so.

Senator Sasser. Mr. Chairman, if I might just interrupt, it is just a 5-page statement and frankly I would like to hear it.

Senator Gramm. So would I.

The Chairman. We have a lot of slow readers on this committee. [Laughter.]

Mr. Brady. I will skip the first page. How's that?

Senator Chafee. No. Let's hear the whole statement.

Mr. Brady. Very well.

I welcome the opportunity to present to you today the views and findings of the President's Task Force on Market Mechanisms. I applaud the committee's willingness to confront these difficult and complex issues you have raised this morning.

The events of the week surrounding October 19 are startling. From Wednesday, October 14, to the close of trading on Monday, October 19, the Dow Jones Industrial Average fell 769 points, or $769, a 31-percent drop in this short period of time.

In those 4 days of trading, the value of all outstanding stock decreased by $1 trillion. The speed of this decline severely handicapped the ability of the stock market to act as an effective pricing mechanism and placed an enormous strain on our financial system. The need to ensure that these events do not recur is obvious and crucial to maintaining the long-term integrity and efficiency of our financial markets.

In this regard, I would like to concentrate my written remarks on two areas: The rationale for the conclusions and recommendations of the Task Force, and the importance of effective legislation to address the unbalanced nature of the current market conditions.

Historically, the stock market has performed two primary functions: Raising capital for new ventures and growing businesses, and providing a safe investment vehicle for individuals. In these functions, the stock market serves as both a harbinger and a facilitator of economic activity and growth. In a real sense, the stock market acts as a barometer of national confidence in ourselves.

Now, the technological and financial revolution of the 1980's has resulted in geometric increases both in the availability of widely disparate investment instruments and in the instantaneous transmission of information to all corners of the United States as well as to a global audience. Investment has been greatly facilitated through the development of communications networks which connect over 110 stock exchanges to a system of 300,000 information terminals, mainly in the United States, but around the whole world.

For example, as Senator Gramm mentioned, for the first time in our history, technology enables a trade executed in New York to be registered in Tokyo in a matter of seconds.

The development of stock index futures and other derivative products has added to the growth of volume in equities traded in the U.S. market. However, the increased scope and popularity of trading activity in these instruments has significantly changed our Nation's investment environment. With this explosive growth, a new financial market system has developed.

In the aftermath of October 19, however, increased volatility and uneasiness has slowed new investment and hampered the raising of capital, particularly by smaller companies. Moreover, the events of October illustrate that an environment exists which is having a hard time coping with many of the demands currently placed on it.

In our investigation of the October break and the current state of the financial markets, it became increasingly apparent that many of the major market participants themselves did not fully understand the nature of the markets. What have historically been seen by market participants as separate marketplaces for stocks, futures, and options, do in fact function as one market. Geographic marketplaces move in concert, linked by electronic information terminals and technology, the similarity of financial instruments and the presence of many of the same participants in this universal market.

Intermarket trading strategies and the dependence on clearing procedures to provide capital flows further connects these markets. Moreover, the institutional and regulatory structures designed for each particular marketplace had not evolved with the emergence of the one market of the 1980's and, as a result, these structures proved to be incapable of effectively responding to the pressures of October 1987.

The recommendations of the Presidential Task Force were derived directly from the conclusion that stocks, stock index futures, and stock options function as one interrelated market. These recommendations were designed to help prevent a repetition of the events of mid-October and to provide an effective and coordinated response in the face of future market disorder.

The task force concluded that one agency must have the authority to coordinate a few, but critical intermarket issues, monitor intermarket activities, and mediate intermarket concerns. The issues which need to be coordinated are those which systematically and unavoidably influence all markets and include clearing and credit mechanisms, margin requirements, circuit breaker mechanisms and information systems to monitor intermarket activities.

As delineated in the report, we recommend that the Federal Reserve be given the responsibility for intermarket regulation. The task force does not view the choice of the Fed to provide intermarket oversight as a heavy-handed intrusion of government into the private sector. In fact, it represents a reordering of existing regulation to conform to present-day realities.

Let me go into the recommendations just briefly. First, clearing and credit mechanisms need to be unified across market segments. Few have come forth to argue that with separate clearinghouses for each market segment, it is not sensible to have a single clearing corporation that has an overview of the intermarket positions of market participants. Currently, no such clearinghouse is able to accurately assess the intermarket exposure of its clearinghouse members or their customers.

Unified clearing would lessen the current credit risk of lending to participants engaged in intermarket transactions and reduce the chance of a repeat of the near financial gridlock of October.

I might say that the recommendations for the committee were listed in the order of their importance in the task force's findings.

The second intermarket issue is margin requirements. Since stock and derivative products compose one market, margins need to be rationalized across markets. While serving separate intermarket functions on the stock and futures exchanges, margin requirements dictate the amount of overall leverage available to a market participant in any financial instrument.

The current disparity in margin levels between stocks and futures allows an investor to control a much greater equity investment indirectly through futures than through a direct investment in stocks. The clear implication is that margin requirements affect intermarket risk and are not the private concern of a particular marketplace; rather, the domain of the one market taken as a whole.

The task force therefore concluded that margins across marketplaces should be harmonious, not necessarily identical, but similar.

The third intermarket issue involves circuit breakers to provide the opportunity for a time-out to an overburdened market. It is crucial to realize that our financial system has limitations. The ability to provide the liquidity that was instantaneously demanded on October 19 simply is not there. It is akin to backing up a fire truck to a garden hose. When the pressure is turned on, there are going to be leaks. In October, these leaks took the form of clogged New York Stock Exchange and OTC trading systems, ad hoc trading halts in individual stocks and options, jammed communications systems, some ineffective specialists and market makers and a market that plummeted mindlessly downward.

The essential question becomes whether one is comfortable relying on the spontaneous circuit breakers that develop during crisis situations such as October, or whether mechanisms should be put in place to provide for current realities. The implementation of intermarket circuit breakers would provide three primarily benefits: One, they would limit credit risk and loss of confidence; two, they would facilitate price discovery; and finally, they would clarify the boundaries of the market environment for investors.

The task force feels that these circuit breakers would function best if they were delineated ahead of the time they were needed, so that all market participants knew of their existence. Also, we conclude that the circuit breakers should be as short in duration as possible to least inhibit normal operations.

We applaud the current experiments by the exchanges that have arisen since the issue of our report to address the circuit breaker issue. However, it would appear that so far these efforts have been derived from an intramarket perspective. We continue to feel that no lasting solution to this problem will be attained unless it addresses coordinated concerns across markets.

Finally, the need for better information systems is obvious if someone is to monitor the intermarket trading strategies that are significant to the one market system. Improved monitoring systems would provide an assessment of market conditions and allow a diagnosis of developing problems as they arrive.

The task force really didn't have enough time to precisely define the role of the intermarket agency, and I take the points of those who worry about the concentration of power that would result in putting such powers into one hand. But we did state that the weight of evidence suggests that the Federal Reserve is well qualified to fill that role. It is my view that the role envisioned for the Federal Reserve in the implementation of the task force's recommendations would include both coordination and oversight, not hard-hearted regulation.

In terms of margin and clearing, the Fed would be legislated to play an active role. Margin requirements for stock index futures and options on stock index futures would be added to the Fed's existing authority to set stock margins. The Fed would also oversee an examination of current clearing procedures to determine whether a single entity or merely a coordination of existing organizations is needed to create a common clearing structure.

In this day of electronics and technology, it seems to me and it seemed to the task force that this is not an arduous task, and is an eminently sensible one.

In other areas, the Fed would be expected to work closely with the existing agencies and self-regulatory organizations to facilitate the adoption of appropriate guidelines. For instance, the Fed would provide oversight and the necessary approval for the exchanges' efforts to implement adequate circuit breaker mechanisms and to come up with improved information systems that would be available in times of crises.

Finally, the task force's recommendations are designed to address the new economic realities of the electronic and technological revolution of the 1980's. Arguments have been made that volatility is not necessarily detrimental to the system and that we should adhere to our free market system, allowing the market to correct itself.

I, too, am a firm believer in keeping our markets as free from regulation and government intrusion as possible. However, the events of October underscore that certain changes must be made to avoid future strain on our financial system. Without proper safeguards, a drop of the severity and speed of October can happen again, with even more far reaching consequences.

In the short run, action must be taken to restore the confidence in the markets. Individuals, if they are to remain the backbone of the marketplace, must have faith in the soundness of their system. Companies of all sizes must have access to the traditional capital-raising functions of equity markets. At present, the increased volatility and uncertain atmosphere have substantially inhibited the ability of financial markets to serve these functions.

In the long run, action to protect the confidence of investors in the integrity and liquidity of our equity markets will serve to maintain their competitive leadership in the global arena. Investment, whether foreign or domestic, seeks a safe, fair, liquid market. Throughout its history, the United States has provided that market and it is imperative that we continue to do so. We must act to prevent a recurrence of the events of October. We are looking down the barrel, and the gun is still loaded. Minor changes in existing laws which would harmonize crucial intermarket elements are the key to avoiding a repeat of the October crises. The cost is small, the benefit great.

Thank you, Mr. Chairman.

[The complete prepared statement of Nicholas F. Brady follows:]

STATEMENT OF NICHOLAS F. BRADY
BEFORE THE
SENATE COMMITTEE ON BANKING, HOUSING,
AND URBAN AFFAIRS

I. Introduction

Mr. Chairman and members of the Committee, I welcome the opportunity to present to you today the views and findings of the Presidential Task Force On Market Mechanisms. Your Committee is currently faced with an historic opportunity to review the current state of our financial markets and address the problems that have been highlighted by the October 19 market break. I applaud the Committee's willingness to confront these difficult and complex issues.

The events of the week surrounding October 19 are startling. From Wednesday, October 14 to the close of trading on Monday, October 19, the Dow Jones Industrial Average fell 769 points, or 31%. In those four days of trading, the value of all outstanding U.S. stocks decreased by $1.0 trillion. Monday's decline of 508 points was the single worst decline in the history of the stock market. The speed of this decline severely handicapped the ability of the stock market to act as an effective pricing mechanism and placed enormous strain on our financial system. The need to ensure that these events do not re-occur is obvious and crucial to maintaining the long-term integrity and efficiency of our financial markets. In this regard, I would like to concentrate my written remarks on two areas: the rationale for the conclusions and subsequent recommendations of the Presidential Task Force, and the importance of quick and effective legislation to address the unbalanced nature of the current market condition.

II. Background

Historically, the stock market has performed two primary functions: raising capital for new ventures and growing businesses, and providing a safe investment vehicle for individuals. In these functions, the stock market serves as both a harbinger and a facilitator of economic activity and growth. In a real sense, the stock market acts as a barometer of national confidence.

Within this historical framework, the present decade has seen widespread change in the structure and nature of our financial markets. In fact, not since the sweeping reform brought about by the Securities Acts of 1933 and 1934 has so much change in the functioning of the stock market come about in so short a time.

The technological and financial revolution of the 1980's has resulted in geometric increases both in the availability of widely disparate investment instruments and in the instantaneous transmission of information to all corners of the United States, as well as to a global audience. Investment has been greatly facilitated through the development of communications networks which connect over 110 stock exchanges through a system of 300,000 information terminals around the world. For example, for the first time in history, technology enables a trade executed in New York to be registered in Japan in a matter of seconds.

The development of stock index futures and other stock derivative products has added to the growth of volume in equities traded in the U.S. market. However, the increased scope and popularity of trading activity in derivative instruments has significantly changed our nation's investment environment. With this explosive growth, a new financial market system has developed. In the aftermath of October 19, however, increased volatility and unease has slowed new investment and, as a result, hampered the raising of capital, particularly by smaller companies. Moreover, the events of October 19 illustrate that an environment exists which is ill-suited to cope with many of the demands currently placed upon it.

III. Conclusions and Recommendations

In our investigation of the October market break and the current state of the financial markets, it became increasingly apparent that many of the major market participants did not fully understand the nature of the markets. What have historically been seen by market participants as separate marketplaces for stocks, stock index futures and stock options do, in fact, function as one market. The geographic marketplaces move in concert, inextricably linked by electronic information terminals and technology, the similarity of financial instruments and the presence of many of the same participants in each market. Intermarket trading strategies and the dependence on clearing procedures to provide capital flows further connects the markets. The severe decline in October was exacerbated by the failure of market participants to fully understand the intermarket effects of their actions. The belief that each market had its separate pool of liquidity and that actions taken in one marketplace did not affect another presented an illusion of liquidity and was a misconception that helped fuel the market decline. Moreover, the institutional and regulatory structures designed for each particular marketplace had not evolved with the emergence of the one market of the 1980's and, as a result, these structures proved to be incapable of effectively responding to the pressures of October 1987.

The recommendations of the Task Force were derived directly from the conclusion that stocks, stock index futures and stock options function as one interrelated market. These recommendations were designed to help prevent a repetition of the events of mid-October and to provide an effective and coordinated response in the face of future market disorder. That the October crisis was precipitated to a large extent by the activity of a few active institutions illustrates the vulnerability of the financial system and the need for remedial action. The Task Force concluded that one agency must have the authority to coordinate a few, but critical, intermarket issues, monitor intermarket activities and mediate intermarket concerns. The issues that need to be coordinated by one agency are those which systematically and unavoidably influence all markets and include (1) clearing and credit mechanisms, (2) margin requirements, (3) circuit breaker mechanisms, and (4) information systems to monitor intermarket activities. Acting on these issues from the perspective of a single marketplace imposes pervasive, unavoidable and possibly destabilizing influences on other related marketplaces and on the market system as a whole.

As delineated in our Report, we recommended that the Federal Reserve be given the responsibility for intermarket regulation. The Fed has the broad expertise in the interaction of domestic and global financial systems, financial strength, prestige, independence and responsiveness necessary to oversee the regulation of our financial markets. The crisis in October ultimately required the Fed to step in to inject liquidity into the market and boost investor confidence. The Task Force does not view the choice of the Fed to provide intermarket oversight as a heavy-handed intrusion of government into the private sector. In fact, in the main, it represents a reordering of existing regulation to conform to present day realities.

First, clearing and credit mechanisms need to be unified across market segments. Few have come forth to argue that, with separate clearinghouses for each market segment, it is not sensible to have a single clearing corporation that has an overview of the intermarket positions of market participants. Currently, no clearinghouse is able to accurately assess the intermarket exposure of its clearing members or their customers. The clearing process has come a long way since the back office nightmares of the 70's which resulted in the creation of the National Securities Clearing Corporation, but this process now needs to be taken one step further to be able to handle the increased scope of trading activity in the current market environment. Also, unified clearing would lessen the current credit risk of lending to participants engaged in intermarket transactions and reduce the chance of a repeat of the near financial gridlock of October.

The second intermarket issue is margin requirements. Since stock and derivative products compose, in an economic sense, one market, margins need to be rationalized across markets. While serving separate intramarket functions on the stock and futures exchanges, margin requirements dictate the amount of overall leverage available to a market participant in any financial instrument. The current disparity in margin levels between stocks and futures allows an investor to control a much greater equity investment indirectly through futures than through a direct investment in stocks. The control of the supply of stock through margin requirements has long been recognized to affect the volume of speculative activity in the financial markets. Different margin requirements in one market segment increases financial risk and can affect the ability of participants to meet obligations in other market segments. The clear implication is that margin requirements affect intermarket risk and are not the private concern of a particular marketplace, but the domain of the one market taken as a whole. The Task Force, therefore, con- cluded that margins across marketplaces should be harmonious -not necessarily identical- but similar.

The third intermarket issue involves circuit breakers that provide the opportunity for a time-out to an overburdened market. It is crucial to realize that our financial system has limitations. The ability to provide the liquidity that was instantaneously demanded on October 19, simply is not there. It is akin to backing up a fire truck to a garden hose. When the pressure is turned on, there are going to be leaks. In October, these leaks took the form of clogged NYSE and OTC trading systems, ad hoc trading halts in individual stocks, options and futures, jammed communication systems, some ineffective specialists and market makers and a market that plummeted mindlessly downward. The question becomes whether one is comfortable relying on the spontaneous circuit breakers that develop during crisis situations such as October, or whether mechanisms should be put in place to provide for current realities. The implementation of intermarket circuit breakers as part of the economic and contractual landscape of our markets would provide three primary benefits: they would limit credit risk and loss of confidence by providing a time-out to allow investors to review their market positions and solvency; they would facilitate price discovery in a severely declining market; and finally, they would clarify the boundaries of the market environment for investors who, in October for example, were unaware of the finite capacity of the financial markets to absorb massive one-sided sell volume.

The October market decline clearly points to the fact that these circuit breakers must be implemented across markets to ensure that the problems in an individual marketplace do not result in intermarket failure. The Task Force feels that these circuit breakers would function best if they were delineated ahead of the time they were needed so all market participants knew of their existence. Also, we conclude that the circuit breakers should be as short in duration as possible to least inhibit normal operations.

We applaud the current experiments by the exchanges to address the circuit breaker issue. However, it would appear that, so far, these efforts have been derived from an intramarket perspective. We continue to feel that no lasting solution to this problem will be attained unless it addresses coordinated concerns across markets.

Finally, the need for better information systems is obvious if someone is to monitor the intermarket trading strategies that are significant to the one market system. Improved monitoring systems would provide an assessment of market conditions and allow a diagnosis of developing problems as they arise. October illustrates that the critical data such as who bought and sold, trading times and customer information must be available in order to effectively monitor the nation's financial systems.

The Task Force did not have enough time to precisely define the role of the intermarket agency, but did state that the "weight of the evidence . . .". suggests that the Federal Reserve is well qualified to fill the role . . .". It is my view that the role envisioned for the Federal Reserve in the imple- mentation of the Task Force's recommendations would include both coordination and oversight. In terms of margin and clearing, the Fed would be legislated to play an active role. Margin requirements for stock index futures and options on stock index futures would be added to the Fed's existing authority to set stock margins. The Fed would also oversee an examination of current clearing procedures to determine whether a single entity or merely a coordina- tion of existing organizations is needed to create a common clearing struc- ture. In other areas, the Fed would be expected to work closely with existing agencies and self regulatory organizations to facilitate the adoption of appropriate guidelines. For instance, the Fed would provide oversight and the necessary approval for the exchanges' efforts to implement adequate circuit breaker mechanisms and to come up with improved information systems that would be available in times of crises.

IV. Importance of Action

The Task Force's Recommendations are designed to address the new economic realities of the electronic and technological revolution of the 1980's. Arguments have been made that volatility is not necessarily detrimen- tal to the system and that we should adhere to our free market principles, allowing the market to correct itself. I, too, am a firm believer in keeping our markets as free from regulation and government intrusion as possible; however, the events of October underscore that certain changes must be made to avoid future strain on our financial system. Without proper safeguards, a drop of the severity and speed of October can certainly happen again, with even more far reaching consequences.

In the short run, action must be taken to restore confidence in the markets. Individuals, if they are to remain the backbone of the marketplace, must have faith in the soundness of the system. Companies of all sizes must have access to the traditional capital raising functions of the equity markets. At present, the increased volatility and uncertain atmosphere has substantially inhibited the ability of the financial markets to serve these functions.

In the long run, action to protect the confidence of investors in the integrity and liquidity of our equity markets will serve to maintain their competitive leadership in the global arena. Investment, whether foreign or domestic, seeks a safe, fair, liquid market. Throughout its history, the U.S. has provided that market and it is imperative that we continue to do so. We must act to prevent a re-occurrence of the events of October. We are looking down the barrel, and the gun is still loaded. Minor changes in existing laws which would harmonize crucial intermarket elements are the key to avoiding a repeat of the October crises. The cost is small, the benefit great.

The **Chairman**. Thank you, Senator Brady. And I want to thank Senator Chafee and others who insisted that you read the statement. It was an excellent statement and we certainly should have had the full statement before us.

Senator Brady, I think your judgment on this is very important to us because you, who have spent your life in this field, undoubtedly know far more about it than any member of this committee, about the market and about what we can do to keep this golden goose healthy and well-fed. And as I understand it, that is exactly what you are trying to do in your recommendations, and your judgment about those recommendations therefore carries a great deal of weight with this Senator, and I am sure it does with other members of the committee.

I started to ask you a question about if this collapse that we had had continued on the 19th and 20th of October, it could have had an adverse effect throughout the free world, not only in this country, but everywhere, and it could have led to a very, very serious economic setback.

I would like to go over each of your recommendations and ask you to answer, particularly in view of the general opinion, put so well by Senator Gramm, that what we may be doing if we get into this would be to kill the goose that is laying the golden egg, and what we should do is by feeding the goose and stroking the goose and helping the goose to recover, and I understand that is exactly what you intended to do.

CLEARING AND CREDIT MECHANISMS

So let's take each of your recommendations in turn. First, clearing and credit mechanisms need to be unified across market segments.

As I understand that first, which you say is the most important recommendation—you gave those in order—would that require, in your judgment, Federal legislation of any kind? Or could it be done by the present regulators?

Mr. **Brady**. I think it certainly could be done by the present organizations if they have the desire to do so. I do remember that when the clearinghouses were put all together for the stock markets in 1970, it did take Federal legislation in order to galvanize action.

I would hope it could happen by the action of independent organizations. I am a little doubtful that that will take place, though. I don't see it as overriding. It could be as simple as trying to coordinate the various tapes that come out of the clearinghouse.

The **Chairman**. In order to assure that this does take place, is there action we could take with respect to an overarching regulator, the kind you recommend? Would that help?

Mr. **Brady**. If the industry isn't forthcoming with a way to solve this problem, it ought to be mandated. That was the conclusion of the task force.

The **Chairman**. And how much time would that require? How long a time do we give them?

Mr. **Brady**. It's complicated. I don't see why industry couldn't be asked to come up with a plan in 6 months period of time which would put all of the clearinghouses under some sort of a common view.

The CHAIRMAN. That would mean that we wouldn't be acting probably in the Congress this year.

Mr. BRADY. I think you could write a law that says that unless that happens, it shall be the duty of the Fed or whomever to effect this kind of coordination.

MARGIN REQUIREMENTS

The CHAIRMAN. The second important recommendation you make is on margin requirements. This, of course, as you know is also very controversial.

Again, would this require, in your judgment, prompt legislation by the Congress?

Mr. BRADY. I think it should, Senator Proxmire. Let me back up for 1 second to give just a little insight as to how the task force arrived at the choice of the Federal Reserve. It really stemmed from our first recommendation, which was a coordinated and well-understood clearing system.

We have that kind of a system now for our commercial banks. Those that argue that under the abolishment of Glass-Steagall, that commercial banks and investment banks are really one and the same ought to be impressed with the sensibleness of the argument that if they are the same, and we have a clearing system for banks that is administered by one person, why shouldn't we have one for investment banks? They do the same thing. Why not have the same kind of safeguards?

So we said, who is doing this now? And somebody said, well, the Fed is doing it now for commercial banks. So that is how we came to the Fed with regard to the first recommendation.

With regard to the second recommendation, it is nearly the same. Margins on stocks are now governed by the Federal Reserve. A little-known fact is that that is also true of the option markets. So we said this makes sense to add to that basket of concerns the margins on futures. They all ought to be in one place. The Fed has got two out of three. Don't invent some new regulatory body to handle that. They are doing it already; give them the third.

The CHAIRMAN. Do we have to find a way to move the Fed to action here?

Mr. BRADY. Oh, I think that does require a change in the law.

CIRCUIT BREAKERS

The CHAIRMAN. My time is just about up, but let me ask you about the next issue because it is so important and so controversial, and that is circuit breakers.

Some people feel that if there is ever an action that would interfere with freedom of property and freedom of markets and so forth, it is telling people they can or cannot trade at a certain time and a certain stock, or in the whole market for that matter. They can't sell their property, can't buy. It is obviously fairly controversial.

At the same time, I think you emphasize here, it is of very serious importance. We have circuit breakers to some extent. So how about that?

Mr. **Brady**. Well, as I mentioned in my remarks this morning, I think the question of circuit breakers ought to be originated with the individual self-regulatory organizations and submitted to the Fed or someone like the Fed for approval. So that would be kind of an oversight function.

We feel that way about the fourth recommendation, adequate information as well. But let me just dwell for a second on circuit breakers because there has been a lot of interest in this, and I think some misunderstanding.

The markets already have circuit breakers. In the Chicago futures markets when a commodity such as wheat goes off over 7 cents, bang, it shuts down. That is a circuit breaker.

They didn't have them on stocks in October, but they now do have limits, rather loose, but they have got them. So that is not a new idea.

The New York Stock Exchange's attempts at circuit breakers are trading halts. When you get an order imbalance, a greater influx of sell orders than buy orders, the New York Stock Exchange calls a trading halt in the stock. That is a circuit breaker.

Our main point is that whatever circuit breakers suit the particular markets ought to be coordinated. You should not have circuit breakers going off in one market that affects the other market. I should say one marketplace that affects the other marketplace and therefore affects the whole market. So we have called for a coordination of these markets, and I understand that there has been discussion by the markets in Chicago with the New York market as to how this ought to take place. It would be the greatest of all solutions if they could arrive at one.

The **Chairman**. How urgent is it? Do we have to act in 6 months or 1 year?

Mr. **Brady**. I think that goes to the question of whether we are facing right away another disorder of the kind that took place in mid-October. I think the answer to that is, if the market is down 30 percent, it is not as likely to go down another 30 percent.

But I see nothing in the market mechanism that is different than before. Sure, people understand that portfolio insurance is a fault strategy and it is being canceled all over the country, but I think the conditions are still here. I think you are doing it just right. I think you ought to hear from everybody, but then I would get at it.

The **Chairman**. Thank you, Senator Brady.

My time is up, but we are under the 5-minute rule. I am going to ask Senator Riegle to chair the committee while I go to the floor. I will be back.

Senator D'Amato.

Senator **D'Amato**. Thank you, Mr. Chairman.

Mr. Brady, let me first say that this report of the Presidential Task Force is absolutely mind-boggling. It is outstanding. And I want to commend you and the people who have worked with you. You have so much information in it, it goes far more, obviously, than one could really summarize, and you have attempted to pick out some of the highlights.

As I look through it, I am going to ask you how in your survey, who are the people that you surveyed with respect to the market and their impressions as to what created this, because I would like to make reference to that.

HOW CONCLUSIONS WERE REACHED

Mr. **Brady**. Senator D'Amato, we did three things basically. We sent out surveys, the kind of surveys that you get when you go on the airlines, and they ask you where you are going and when you are coming back, and that sort of thing, to 500 or 600 institutions, individuals, stock exchanges, whatever, the whole universe.

Senator D'**Amato**. So this is the leading people in these areas?

Mr. **Brady**. Absolutely. But those were just mailed out and some, about half of them I think, got mailed back because of the shortness of time we had.

Then we took testimony from witnesses, I suppose somewhere between 50 and 75 or 100 witnesses, over the 2-month period. What we found was that that testimony-taking process became anecdotal. And we very early on decided that we had to have the fact base, and we spent probably 45 of the 60 days coming up with the fact base, the data base that is the formation for chapter 4 of this report.

Senator D'**Amato**. Let me say that in just looking at some of the charts and some of the reports of those people that you have surveyed—leading institutions, brokerage firms, et cetera, that went into this—it leads one to believe that there are some rather specific areas, as opposed—and I am not questioning the need for clearinghouse procedures. I think, as you mentioned in briefing some of us privately, that if there is any one thing that we should do, that cries out. As a matter of fact, I think we should implement that; we should look so that there is interrelationship, and whether it is the Fed that is used in that capacity or someone else, I would not argue that. Maybe it should be the Fed.

I do have some questions with respect to enhancing it beyond that management aspect.

But I look at this one area. Among technical factors, when people were asked to rate them, 28 percent said portfolio insurance. That was the reason most cited for the market's decline on October 19. I daresay I wonder how many members of the committee have any idea of what portfolio insurance is, and yet those in the industry, those in the institutions, et cetera, cited this as the leading factor, 28 percent—I am reading study 5, page V-8.

Again, that is why I say this rush into saying X, Y, and Z should be in charge of this, we had better take a look at these things, begin to analyze them and look to see what the people in the marketplace are saying.

The second most often cited was stock index arbitrage. There we have some idea—I must confess to you that I continually attempt to get my staff and others and, when I go down to the street, to explain to me some of the machinations of this thing, and I still haven't—and that is 17 percent. So now we have a total of something like 45 percent saying between portfolio insurance, stock arbitrage, and then we have another 15 percent who say program trading. And I daresay there are not too many of us who really are acquainted with the technicalities as it relates to program trading.

So now we are up to about 60 percent. And then there are 10 percent who say the specialists, and I daresay that is in terms of their capital requirements and whatnot. And it does say then, poor capitalization specialists. So about 18 percent focus in on the specialists, et cetera, whether it is capitalization, whether it is the manner in which they operate, et cetera.

My point is, it seems to me that within the system that there are areas that we should and can be moving in to deal with this. When we talk about the system, these are technical areas that need further explanation, need further expansion on, and then these people should be called in to say exactly what do we do as it relates to portfolio insurance; what do we do with respect to stock index; how can we improve that system, cut down on the volatility and, by the same token, not impair capital formation, et cetera?

Have we gotten into a business where we really are gambling? Have we made this really a casino, taking in the huge sums that are at risk, which are really tied up in so many cases in people's pensions, et cetera?

I see the little red light has gone on, but I commend you for this extraordinary work. But I would hope that the rush to judgment is not so narrowly defined as saying, now, let's throw this in the lap of X, Y, or Z. And that is why my statement as it related to the Fed. I think that would be a vast oversimplification without us really carefully looking at these various areas that your report brings out, major areas of concern of those people who are most knowledgeable in this area as to why, what precipitated, what exacerbated October 19.

Let me commend you again for your outstanding job.

Senator **RIEGLE** [presiding]. Thank you, Senator D'Amato.

Did you want to comment on any of those things?

Senator **DIXON**. I would like to hear the comments, Mr. Chairman, if you would.

Mr. **BRADY**. Well, Senator D'Amato has put his finger on some important points.

I would say that to some extent, Senator, we are looking at symptoms rather than root causes. In other words, the stock index arbitrage exists because you have two separate markets, New York and Chicago. So that goes back to the point that we have one market. There is so much of a one market that an industry has grown up to arbitrage in between it.

With regard to portfolio insurance, as I mentioned earlier, I think there should be a much closer look taken at that in light of what happened in October, so that the free market forces would take care of that. But that does not convince me that it won't start up again in some different form. When you have the kind of volatility and kind of volume you have in a market, the structures of which are ill-suited to take care of it, you are going to get leaks in the pipe.

I don't get into analogies as well as Senator Gramm does, but it really is akin to backing up a fire truck to a garden hose and turning the pump on. You are going to get leaks. So I think that what the institutions have replied to here that you pointed out, are symptoms rather than root causes.

Senator D'AMATO. Mr. Chairman, I know my time is up and I don't mean to be argumentative, but I think we are the issue, at the nub, whether it is portfolio insurance which ranks 28 percent and I daresay that if you were to ask even some of the technical financial writers, they couldn't tell you what it is about. And yet we hear that as the overwhelming response by the people who are involved in this.

PROGRAM TRADING

Then we go down to program trading, 15 percent. I was away on vacation. My gosh, I was harassed by this little old lady at the most inopportune time. She said, are you who I think you are, and was grabbing my arm, and I was trying to do something else with my arm. And she kept saying, you have to stop it, you have to stop it. You have to stop that program trading; it is a terrible thing. And all night she harassed me.

The next morning, believe it or not, I was out to take this taxicab and, my God, the same little old lady appeared. And she said, you better stop it, that program trading.

Obviously, we better get some definitions as to what is this program trading. Where are some of the abuses? What do we do with this area? I just think it is more than symptomatic. I have spoken to some of the people on the street, and they say to me, yes, there have been some real abuses here.

I have gone too far. Thank you.

Senator DIXON. Mr. Chairman, is that a vote?

Senator RIEGLE. Let me have the staff check to see if that indicates a vote.

We are having that checked at the moment.

A point was raised earlier in the statements at the outset that here we are, looking back in time, and was anything being done ahead of time to try to anticipate this problem?

In fact, a lot of work was done because concern had been building in this committee. I have in front of me a response from former SEC Chairman John Shad, dated March 10 of last year, responding to a request that I had sent to him expressing concern about stock market volatility, index-related trading strategies and program trading, the subject of Senator D'Amato's encounter with one of his constituents.

In any event, we received then a report from Chairman Shad in June 1987. It didn't say much. But in fact these issues had been raised with the SEC. But, more specifically, on May 13 in this very room, John Shad, the former SEC Chairman, the longest-serving chairman in the history of the Commission, was sitting where you are, Mr. Brady, and I asked him this question. And I read directly from the committee print.

> When people talk about the possibility of a market meltdown because of this telescoping and that you get everybody coming through the door at the same time, and all of a sudden you start to go down at an accelerating rate, is it feasible for that kind of thing to happen in your view?

Now, this was 5 months before the crash. Mr. Shad responded:

> I think there is an enormous panoply of reasons why something comparable to 1929 is incredibly improbable to occur under the present economic and regulatory environment.

He goes on to say,

> As for the meltdown theory, I just don't think it's likely.

So I pressed him a little harder. I said,

> Some have argued that, given the number of market devices that are now being used for portfolio insurance and indexes of various kind, triple witching hour and all the rest of it, that you could conceivably get a combination of events where, in the name of volatility, you might see the market in a given day not go up or down 150 or 200 points, but maybe 500 points. Is that also beyond the realm of realistic possibility in your view?

Chairman Shad answered exactly as I quote:

> In terms of the probabilities of a 1-day break of 500 points on the Dow Jones Average, I would say I think it is highly remote, very remote.

And he goes on to sustain that point of view.

Now, that was on May 13 of last year. That was 5 months ahead of the crash. So these are not new issues. These were issues that were being raised well ahead of time by many of us, and frankly the regulatory people who were in charge at that time said, look, don't worry; things are fine. And what we learned, I think to our clear dismay now, is that things were not fine and that there are real risks out there.

I must say, I am very struck by the final statement, nearly the final line in your testimony today, when you say that in effect—I will give you the quote—"we are looking down the barrel and the gun is still loaded."

Now, you are a very seasoned professional. You have been in this business all your life. You had a distinguished period of time here in the Senate. When you say something like that and you choose those words, those are words that I accord great weight to, because I think you are trying to create a sense of urgency about the problem here that is really unmistakable.

So I would hope that we would act, obviously in a measured way, but inaction to me is not stepping up to the issue. Now, later in the afternoon, Chairman Greenspan will be here, and he has already taken exception with one of your recommendations. We have his statement and I want to read to you his response, his contrary response to one of your recommendations, so we can have your response to that, your answer to it.

INFORMATION COLLECTION

He will say this afternoon, the statement says,

> The Brady Task Force proposes that detailed trading information be collected on a regular basis for purposes of monitoring market developments and identifying market abuses. The information to be collected would include, in addition to the trade, the time of the trade and the ultimate customer. While recognizing the potential value of such information, my colleagues on the Board and I oppose such data collection, except on a voluntary basis. The right to privacy is important for a free society and we believe that the case for collecting such information must be a compelling one, which this one does not seem to be. Also, such an action by the United States alone could well reduce the attractiveness of our securities markets to foreign investors at a time when we are heavily dependent upon foreign capital for financing our external deficit.

So he says don't collect the data.

What is your response to the points he raises here?

Mr. Brady. I share the same respect for Chairman Greenspan that everybody else does. But with regard to the collection of information, this is information that already exists. The major investment banks have it, just didn't collect it in one place.

A court or Congress under subpoena could get the information if they felt it, so it is as not as though we were creating something new or originating a tremendous invasion of privacy. The fact is that it took us 45 out of the 60 days to accumulate this information, and it wouldn't have been possible to do so unless we had had the cooperation of the major participants in the market.

Senator, one of the things that I was most impressed with, 50 or 60 people, young people whose futures are in this industry served on that task force. They went out and got this information, knowing full well that the picture that would ultimately be shown here was not going to be a pretty one. So the young people to me showed a concern that I share. We are not suggesting that this information should be listed on the front page of the Wall Street Journal. I think it ought to be privileged.

I don't know how you can ask somebody, be it the Fed or somebody else, to regulate between markets and have to take 45 days to find out what it is you are supposed to be regulating.

Senator Riegle. So we need the data. We need to have the data collected and readily available.

Mr. Brady. I think so. I think it ought to be privileged. It exists now, so I would respectfully disagree. If that is what Chairman Greenspan said, I would respectfully disagree.

Senator Riegle. Was there any data that you needed that you were not able to get in the time period that you had?

Mr. Brady. I am probably not the one to answer that question. I don't really think so, but I can't tell you that I was there every minute they were asking for data. We got most of the data. It just took a long time to get.

IMPLICATIONS OF CLOSING MARKETS

Senator Riegle. Just one other thing. If the New York Exchange had closed down and, in a sense, all the exchanges had closed down on the 20th, where we came within an eyelash of doing so, or if were we to do that sometime in the future, what would the implication of that be?

Mr. Brady. Closing down the exchanges?

Senator Riegle. Yes.

Mr. Brady. Well, I don't think it is a good idea. That is why the task force came up with——

Senator Riegle. What I am saying, what would be the consequences, should that happen either by design or the system just couldn't function, what are the implications of that? What are the risks?

Mr. Brady. I suppose that that is a possibility, but we never really contemplated that because we came up with the idea of circuit breakers, which are just like the electricity system around your house. When you hitch up the icebox, the curlers, the toaster, TV, and then put the vacuum cleaner on, the system goes out; it tells you don't do any more of that.

To me, that is the way to do it, rather than to say this house doesn't work, we have to shut off for a while.

Senator **Riegle**. But I am really asking you a different question. I just want to pursue it one more minute.

That is, until we get the circuit breakers in place and there is an argument for the circuit breakers, what are the risks if the market system were to shut down? What are the implications of that?

Had the market system shut down on the 20th, what would the aftermath of that had been? I think this is what people have to understand so that we can have the case in place for why circuit breakers are needed to prevent that from happening in the future.

Mr. **Brady**. Senator, I think it is hard to say what would have happened if you were born on another planet. I am just not able to do that. I mean we have the Hong Kong market that shut down for 4 days. It went off some percentage. Our market didn't shut down, it was interrupted. So I think it is hard to conjecture how that might come out.

Senator **Riegle**. Senator Bond.

Senator **Bond**. Thank you, Senator Riegle. I commend you for your prescience on May 13. I only hope you were short on October 19.

But I would like to address a question based on the testimony we have already been presented by Chairman Greenspan. As you may know, Senator Brady, he is not wild about the idea that the Fed be given the responsibility of the overall coordination. He cites the lack of technical expertise which he feels has been developed by the SEC and the CFTC, and he goes on to state.

> There could be a presumption by many that a Federal safety net applicable to depository institutions was being extended to these markets and the Federal Reserve stood ready to jump in whenever a securities firm or clearing corporation was in difficulty.

Now, would you care to comment on that? And also his suggestion that, as an alternative mechanism, a committee of the SEC, CFTC, maybe the Treasury and the Fed, and I think maybe the Comptroller may even want to be on it, should exercise that responsibility.

Mr. **Brady**. I am not surprised that Chairman Greenspan doesn't want to take this task on. It would place a burden on the Federal Reserve Bank.

However, I am impressed by the fact that with regard to the clearing systems, they do that job already, and also with respect to two out of the three margins. However, the fact that in the commercial banking system the Fed already is the court of last resort and, in a sense, is a guarantor of the system in the sense that we know it, spreading that same concern to the investment banking community doesn't seem to me to be a great step.

Those people who argue that commercial banks and investment banks are the same and you ought to abolish Glass-Steagall, then I don't see why we don't have the same kind of clearing systems and general oversight guidance that the Fed provides for the commercial banking system available to the investment banking community.

So I take his point, but I think that the Fed is already doing that with regard to the commercial banking system.

Senator **Bond**. Since you mentioned Glass-Steagall, you know that we have been hashing out and discussing that quite a bit, cussing and discussing.

Would you think it would have made a difference on October 19 and 20 if Glass-Steagall had been abolished, and should we delay action on S. 1886 in light of what happened on those day?

Mr. **Brady**. I don't think it would make a difference. I think I will leave it up to your good judgment as to whether you ought to delay or not.

INDIVIDUAL INVESTORS

Senator **Bond**. One of the things that I am concerned about, is the basic question of, in light of October 19 and 20, why should a small investor feel comfortable putting his money into a market that can be disproportionately influenced by a few large institutions?

We have a short sale up tick rule on the New York Stock Exchange and the commodities markets have a limitation on size of positions. Is there anything specifically that could be done to assure the individual, the family investor, that he only takes an economic risk and not a risk of being trampled by the elephants?

Mr. **Brady**. I think really you should ask the people who run these exchanges, Chairman Phelan and Chairman Melamed and the other people from Chicago, what their answer to that question is.

The task force cited the fact that we think you ought to tilt the scale on the side of the individual investor. If there is a jam-up in the DOT system, it seems to us consistent, both with the spirit of the way we operate in this country and the fact that individuals still own 60 percent of the market, that he be given a preference to act if he so feels.

Senator, I would say that the individual investor wasn't a very big part of the activities of mid-October.

Senator **Bond**. Was that because in many instances he couldn't be, could not get his phone answered?

Mr. **Brady**. No. I don't think that is the main reason. It is a reason. It is a concern. But I think the individual investor is a buy and hold guy. I mean he takes a long view.

It is a strange commentary on this country that the individuals—or maybe it isn't strange—that the individuals are the guys that stay there, through market turbulence, and that institutions do the trading.

Senator **Bond**. One final question.

Your comments about the over-the-counter market have raised some counter-statements and some contentions. Do you see any specific changes in the over-the-counter markets that you would recommend in addition to more capital?

Mr. **Brady**. Senator, we really didn't have the time to get into that. So I would let that pass if I may.

Senator **Bond**. Thank you.

Senator **Riegle**. Thank you, Senator Bond.

Senator Dixon.

Senator Dixon. In his questioning of you, Senator Brady, the chairman dealt with the first three matters that you suggest in your order of priorities on page 3, and I would like to quickly return to that for just a moment.

Your first, and therefore I think you believe it to be the most important priority, is clearing and credit mechanisms need to be unified across market segments.

My understanding of the exchange between you and the chairman was, in a very simplistic way, that you believe it would be possible for the industry itself and the futures market and so forth in Chicago, and the New York Stock Exchange, to accomplish this kind of unification on their own initiative in a 6-month period if it wanted to undertake to do so; isn't that true?

Mr. Brady. Let me distinguish, Senator Dixon, between what I think will happen and what I hope would happen.

I would hope that that would be the case. You know better than I, embedded longstanding institutions are not necessarily quick to change, and I would worry that we could get it done, and I think we ought to get it done. But I certainly think the first people to ask how this ought to be done are the people doing the business.

Senator Dixon. Your point was, and I think it is well taken, that before we impose Federal regulation of one sort or another, we ought to let the industry itself see if it can answer that problem at the industry level; is that true?

Mr. Brady. In saying that, I would have a relatively short leash on that time period.

Senator Dixon. You suggested 6 months.

Mr. Brady. That's fine.

If you are asking me, should we make a statement, should Congress make a statement to that, I say no. I think you ought to have some sort of a written law that says, look, these are the problems; we will take testimony and, if not, then we will recommend a solution.

I don't know how you could write that, but I would be glad to try and help.

Senator Dixon. But you would give an opportunity to the industry to address that problem.

Mr. Brady. Sure. And I think that is going to start, Senator Dixon, in ensuing testimony.

Senator Dixon. Fine.

VARYING MARGIN REQUIREMENTS

Now, the second imperative in your list of priorities is the intermarket issue of margin requirements. First of all, I think there is a common understanding in the public, the newspapers and the media have suggested many times, that the margin requirement on the New York Stock Exchange is 50 percent. But you yourself I think have said, and others have informed me, that with the professional traders and others, that it is as low as 20 to 25 percent, and under certain types of response mechanisms that I don't fully understand, that it can go even lower than that.

Is that true?

Mr. **Brady**. My understanding is that for a professional investor in the stock market, it is 25 percent.

Senator **Dixon**. My understanding, and I would yield to your superior knowledge as an expert in the field, is that sometimes it is even lower than that when certain criteria are met.

Mr. **Brady**. That is possible in this changing world. If it is, I don't know about it.

Senator **Dixon**. In addition to that, is it not correct that there is a distinction between an investment in the stock market, your buying the stock, and the futures market where you are hedging against substantial changes in value, taking out some kind of an insurable position?

Mr. **Brady**. It is stated to be a difference; that is correct.

Senator **Dixon**. Let me ask you this. You suggest in your statement, both in the report and in the statement you made to this committee, that you don't necessarily believe that the margin requirements should be the same, identical, so long as there is an accomplished purpose in what is ultimately done.

Is that right?

Mr. **Brady**. I think that is right. They do not have to be identical, but I think the words we used, Senator Dixon, was "similar."

Senator **Dixon**. All right.

It is a fact, is it not, that the futures industry requires payment in full within 24 hours in circumstances such as occurred on October 19; that there is a 7-day payment requirement in the New York Stock Exchange.

Mr. **Brady**. I think it is 5.

Senator **Dixon**. It is 5, but it can be extended to 7. Would you agree with that?

Mr. **Brady**. I think the normal settlement is 5, but your point is the same.

Senator **Dixon**. Would you say that it is possible for the industry itself there again to work out some kind of a harmonious agreement in respect to that, that would take care of the concerns you have about a single marketplace?

Mr. **Brady**. I definitely think so, particularly if there is the prospect of somebody else doing it for him.

Senator **Dixon**. Good.

Now, the last thing that the chairman had an opportunity to discuss with you—he wasn't able to get to priority four—was three. The third intermarket issue involves circuit breakers that provide the opportunity for a time-out to an overburdened market.

And you correctly pointed out that, for instance, the futures industry has been doing this and is developing more responses in that connection already.

Isn't that true?

Mr. **Brady**. That is correct.

Senator **Dixon**. Would it not be the case, and I thought I got that at least implied in your responses to the chairman, that that is also a possibility that could be taken care of inside the industry itself and perhaps by a conversation between the SEC and the CFTC working cooperatively with other already-existing agencies?

Mr. **Brady**. Let me be clear about this because I don't want to back off the task force recommendations, Senator Dixon. I think that if you asked me could the circuit breaker coordination be accomplished by the SEC meeting with the CFTC, I wouldn't leave it to that.

I think we need some way of breaking that deadlock which the two organizations have with respect to that kind of a mechanism. If you asked me this morning what I think, I don't see why whatever body you and your colleagues choose as the intermarket organization to have oversight, the Chicago, New York and other concerned exchanges ought to come to that body and say, here is what we are planning on doing; do you agree?

If they agree, it is what happens. If it isn't, then they have to send it back to the drawing board and do it again until they get something that is needed.

With regard to margins, I think it just ought to be put in the Fed because that is where two out of the three are. I take Senator D'Amato's point about putting more power in the Fed, but why? It is already there.

Senator DIXON. My time has expired, Mr. Chairman, and regrettably I can't get to No. 4, your last priority.

But may I conclude simply by observing that what you have suggested here in many cases, I think, quite obviously is the kind of valuable suggestions that the industry as a whole and the separate segments in New York and Chicago are already carefully analyzing and are concerned about in view of your very highly respected opinions. And I sense that you feel that a good deal of this can take place within the industry if we permit a reasonable period of time to elapse.

Mr. BRADY. I think that is right, but I do think, Senator, that it ought to be within the framework that somebody is going to present them with a report card. And the word "oversight" has been used, and I think that is a good word.

Senator DIXON. This is, of course, the oversight committee.

Mr. BRADY. Right.

The CHAIRMAN. Senator Gramm.

Senator GRAMM. Thank you, Mr. Chairman.

Nick, in looking at your tables here and in following up what Senator D'Amato said, you start off on page V-3 and you have got "Perceived Importance of Factors Affecting Stock Market Decline During the Week Preceding October 19." And 77 percent of these people whose opinion you have asked, who are knowledgeable people, say that fundamental factors were to blame and those fundamental factors are things like rising interest rates, trade and budget deficits, declining value of the dollar, et cetera.

Then 6 percent say technical factors and 17 percent say psychological factors. And when you come over to technical factors, of the 6 percent that say technical factors, 28 percent say portfolio insurance, which means 1.6 percent of the people thought portfolio insurance was what made things go to hell during that week.

Interestingly enough, with regard to program trading, only .9 percent felt that program trading was the factor that pulled the trigger in the problem.

I get a feeling that maybe the people back home think we are holding a hearing to see what we can do to make prices always rise or prevent them from declining.

IF BRADY TASK FORCE PROPOSALS HAD BEEN IN EFFECT

If every proposal you have made in your report had been in effect, do you think prices would have gone down in that week in October, or do you think they would have gone down less than they did, or do you simply think the market would have worked better during the decline?

Mr. **Brady.** What I think is that the market would not have gone to the heights it went to. I mean the same forces that propelled the market down in a short period of time were also the ones that propelled it up.

Everybody asks why people didn't notice that. I can't do anything but get into the world of analogies myself, which is how many pictures have you seen of a house being built and how many have you seen when they get moved or burned down? People are not interested in the details of almost an ascending anything.

But when something goes down, brother, it is right on the front pages of every newspaper. So if you ask me, I think the same exact forces that pushed the market from January to mid-August, from 1900 to 2700 was responsible for bringing it down in that same period of time. And I firmly believe, as I believe other members of the task force agree, that if you put these rather mild corrections in our existing regulations in place, you wouldn't have had either one or the other.

Senator **Gramm.** Let me be sure I have got this right. So if we had adopted all these proposals, looking at the index most often sighted, we wouldn't have had that extra 700 point rise and we wouldn't have had the extra 700 point decline. But you certainly would not have gotten the rise without the decline.

Mr. **Brady.** You wouldn't have gotten the decline without the rise.

Senator **Gramm.** Nothing you are proposing would have given them the 700 points on the up-side and protect them from it coming down.

Mr. **Brady.** I think with our proposals, you would not have seen the market at 2700 on the Dow and you would not have seen it coming down whatever the number of points it was, 737 or whatever the figure is in October. The task force is convinced of that—the same forces.

And if I could just stop for a second, Senator Gramm, the proposals with respect to margins and circuit breakers are key because margins control the volume available to the system, the amount of stock that circulates around the system, and if you have less volume that is an important part of damping down the system.

With regard to circuit breakers, it simply says to anybody that thinks he can sell $1 billion worth of securities in 1 day, the lights are going to go out. So he must say to himself, I am not going to get in that far if I can't get out that far. It is pretty simple.

Senator **Gramm.** Have you looked at any kind of estimate as to what effect imposing your system right now would have on the market? Have you got any concern that that might have a net depressing impact? Or do you think that that 700 point run-up and drop-off pretty much took out the kind of thing you are trying to deal with?

Mr. **Brady**. I am not sure I can answer that question. I just don't want to repeat what we did in the early part of 1987 and October of the same year. An enormous amount of confidence that fuels the growth and provides jobs in this country comes from what people think about the stock market. Myself and the other members of the task force felt that let's not do this again if we can do simple things to stop it.

Senator **Gramm**. Nick, I do think it is a relevant question, and I am not by any means suggesting that we would have never had the rise from 900 to 2700 had your proposals been in effect.

Mr. **Brady**. 1900, I think.

Senator **Gramm**. Clearly, there were underlying economic factors in the run-up, just as there were in the collapse. But I think it is a relevant question that we have to ask ourselves, and that is what would the imposition of these changes do to the market as it now exists?

I think, had you gone out and tried to cut a deal with American investors and said, look, I can guarantee that at the existing equity level of 1982 or 1981, we are going to have a stable market and that we will never have a 500-point decline, but we are not going to go up to 2700 either, you would at least get some debate about whether to take that deal.

And I think one of the things that we have to ask ourselves, especially in this period of uncertainty, is if we are going to change the rules of the game, what is it going to do to underlying equity values?

I am not suggesting for a moment that it is going to take us back to 1981, but I think it is a legitimate question. What will these new rules of the game do? What are we buying in terms of lost performance, paying for in lost performance in terms of stability, and what are the tradeoffs? I just don't think those are obvious answers.

Mr. **Brady**. No.

Senator, please, if I indicated that they are obvious, that is not what I meant to indicate. I think your question is a very good one. But you asked my opinion, and I don't think it would make much difference that you take the level of 1900 which it was in January.

Please, if I can, let me state that these questionnaires were sent out about the first day that the task force was in business, long before the information that came out of chapter 4 was available.

Again, this is a guess, but if you sent it out again today, I think you would get a much different answer. Nobody really knew what the results of mid-October meant.

The **Chairman**. Senator Sasser.

Senator **Sasser**. Thank you, Mr. Chairman.

Senator Brady, according to the president of the North American Securities Administrators Association, who also happens to be Tennessee State Securities Commissioner, the losses suffered by small investors on Black Monday—and I quote him—"are a direct outgrowth of a financial regulatory system which in recent years has deemphasized the protection of the individual investor."

I cited a moment ago the fact that there were 7,000 telephone calls to this one hotline that the Association of American Securities Administrators set up. They found that there were 103,000 telephone calls from small investors that were turned away.

There is a lot of anger in the small investor community, I think as you know, all across the country, citing that their brokers didn't answer their telephones, they couldn't sell their stocks, et cetera, et cetera.

PROTECTION FOR SMALL INVESTORS

Now, how do we go about protecting small investors? You have suggested that small investors be given preference in executing their trade when there are these great order imbalances. How can we do this?

Mr. **Brady**. I don't know as you can with regard to the market as a whole. I was saying that if we regarded the DOT system, which is the automatic New York Stock Exchange order intake and sale system, that you could. But it seems to me that we ought to look very hard—and I know the Exchange is. John Phelan and the people who run the stock exchange are very concerned about this. I think they will do something about it, but you have to look there first.

With regard to the whole market, you can't. And I am not sure that the investor, the individual investor is going to be worse off from hanging on. Maybe he knows more.

But, Senator Sasser, I think the question really is, it is a little like the telephone system at Christmas time. If you want to build a telephone system so that everybody can call home at Christmas, then you are going to have to pay a lot more during the rest of the year for the availability of that system.

I think that what we have here is that kind of a question. If you want to build the system up where everybody can get in, it will be very expensive if you do. I don't think we ought to do that.

Senator **Sasser**. Senator Brady, it appears to me that it is imperative that these small investors feel that they can invest and buy and sell with some confidence because, as you have indicated, they are generally in it for the long term, and if they start backing off—in other words, it took a decade or two, or maybe three decades, almost a generation before many small investors would come back into the stock market after what occurred in 1929.

If ever we are in need of equity capital in this country, it appears to me that it is now.

Let me ask you one other question. Last December, the Wall Street Journal ran an article in which the principal thesis was that a speculative fever had been running high in the stock market for the 10 months prior to Black Monday, and one of the things that contributed to this bubble according to the article was the switch away from the traditional means of valuing stocks.

Now, I think you indicated that in your report, as did the General Accounting Office. The new valuation method, the so-called breakup value, which is the valuation method used in corporate takeover activity, became the means to justify extraordinarily and, some say, unrealistically high prices for stock. And the takeover stocks led the market up and then, come Black Monday, the takeover stocks led the market back down.

Now, you indicate in your report that one of the precipitating causes or one of the principal causes was the takeover tax that was being contemplated by the House of Representatives.

Senator, I would like to get your rationale for justifying that. I ask you that question for this reason: It appears to me that what occurred on Black Monday, if we are going to use analogies here, was very similar to a great rock that had been slowly—whose base of support had slowly been eroding. And finally one day, a sparrow lands on that rock and the rock falls over the precipice and causes a landslide.

I think you can make a case that what occurred on Black Monday was the market was finally coming back to reality and it was facing reality and was simply reacting to a slowly building crisis, the crisis of an economy that was not competitive, the crisis of a Federal fiscal house that was in great disorder, a crisis of trade deficit, and the takeover tax was simply the scintilla that fell on the rock that caused the rockslide.

What do you say to that argument?

Mr. Brady. We started out our report in analyzing the factors, and the reason we included all of these studies in the back was so you would have them all available and you could see what you thought yourselves. But as we got into it, we found that it wasn't the fundamental causes that caused this particular drop. It may be fundamental causes that that caused other drops, but this one was not the case.

In fact, when the Presidential order came down in the first few days of the reports, it said the President's Task Force on Market Mechanism, I thought someone had gone haywire. I said, what is this guy talking about? What does it mean?

As we got into the study—and that is why we got into the study—it became clear to us in rendering unanimous support that it was market mechanisms. Now, that is the market itself.

I am perfectly willing to agree that there were other things out there: Twin deficits, currency worries, the Persian Gulf. If you ask somebody to describe an anatomy of an event, you have to describe all of the parts of it. You have got to say, if it is a car accident, that the light was green or someone was standing here or there or what.

I am trying not to point the finger at any particular one because we didn't see that as the cause, but we said it started on Wednesday, and on Wednesday the concerns were the tax on takeover stocks. So we didn't say that was the cause for it, but when you have a market mechanism that isn't working, it doesn't take a—you said a sparrow; I will agree with that analogy. But why the rock was where it was, if you will excuse me, I don't buy into that part of it.

Senator Sasser. My time is up, Mr. Chairman. Thank you.

And I again want to express my appreciation to you, Senator Brady. You have rendered, I think, a superb service in compiling this report. I think it is one of the most valuable documents that I have read in some time.

The Chairman. Senator Sanford.

Senator **Sanford**. Let me pick up on Senator Sasser's general field of inquiry because I think it is worthy of some additional consideration.

When you testified before this committee regarding takeover legislation, it occurred to me that sophisticated traders could get so skittish about something that the Ways and Means Committee did, not knowing as surely as they should have known, that it takes a long time from the Ways and Means to a law. They had plenty of time to get out of the market in a more orderly way, but in order to take advantage of takeovers those people dealing in stock might very well have thought, well, the jig is up; we better get out of this kind of business.

But looking at the charts on page 16, it is a rather impressive picture of the way out of line overvaluation of so-called takeover stocks.

TAKEOVERS AND THE RISE AND FALL OF THE STOCK MARKET

This hasn't got a whole lot to do with the market mechanisms, but it has a great deal to do with the regulation of the investment business as to takeovers, what part has the takeover mania played in the rise and fall of the stock market?

Mr. **Brady**. I really can't give you a good answer on that. I testified before, Senator Sanford, during the junk bond inquiries as to my feelings that the existence of junk mechanisms to take over companies was a one-sided philosophy and I still feel that way.

But if you ask me about the process as a whole, as that concern begins to intercede the actions of a free market, I would tend to vote in favor of the free market. I have not thought a lot about it; I don't have an answer at this time.

Senator **Sanford**. There is also a great deal of testimony that the takeover process itself left out a lot of the stock of the small stockholder; that it was more or less stacked against them.

Mr. **Brady**. I think we have an enormously short-term view in this country. And I am not sure, I am going to start thinking about it, what it is due to, I don't know. But preoccupation with quarterly earnings instead of the preoccupation of coming up with research programs that provide new products and new jobs and give us the products to compete on a worldwide basis is essential to where we are going here, but I think we are getting way off in another domain.

Senator **Sanford**. I simply thought it was interesting that in looking at the mechanism, you did pay a fair amount of attention to the effect of takeovers. The market's final run-up to 2700 in August was accomplished through the combination of strength in the big capitalization stocks and continuing merger and acquisition activity, which is on page I–4, it appears, of the appendix.

Mr. **Brady**. I am sorry. I'm lost in our own report.

[Pause.]

Senator **Sanford**. It is Roman numeral I–4 of the appendix, just looking down at the bottom of that first column on the market's final run, and then on into the next paragraph.

> Takeover activity was the mainstay of the market. It is strong and it is expected to continue. The high takeover valuation method supported a broad range of stock well above the traditional valuation levels.

It would seem to me that running up the stock to an artificially high position had a great deal to do with its coming down from that high position, since it was overvaluation that we were seeing.

Mr. **Brady**. It was one of the factors, not the factor, but one of them that should be mentioned.

Senator **Sanford**. Mr. Chairman, I think that I will leave it right at that point. Clearly, regulating takeovers is something we need to do as one means of preventing the overvaluation of stock prices.

Thank you.

The **Chairman**. Senator Sarbanes.

Senator **Sarbanes**. Thank you very much, Mr. Chairman.

First of all, I want to join the others in welcoming former Senator Brady here before the committee and to thank him for the very fine work which he has done.

I am struck by some of the reaction to your report, and even by some of the questioning here today which seems to suggest that there isn't a lurking crisis that must be dealt with.

Let me put this question to you. Aren't we at risk every day of the possibility of a repeat of what occurred last October?

Mr. **Brady**. Senator Sarbanes, I would only quarrel with the adjective "lurking" and the description of "every day." I think that this is an imbalance in the system dealing with how we value and trade equities in this country. We ought to fix it.

To take the chance of doing again what happened in October just doesn't seem to me to be sensible, and that the changes that are being called for here are minimal, a reordering of regulation, and the application of a light hand to the markets. So I just think we ought to do it.

And the answer is what I said before: I think it can happen again. It won't happen again tomorrow, I don't think, because we are 30 percent lower in the market now and a lot of what went on is known. That doesn't convince me that 1½ years from now there won't be other systems which approximate the ones that were operative here that will arise.

Senator **Sarbanes**. Nick, you are always very general in your spoken testimony. I simply quote what you say. "We are looking down the barrel, and the gun is still loaded."

Mr. **Brady**. I don't back off from that. But you said "lurking." I guess that is OK. I don't think the trigger is going to be pulled right away, Senator Sarbanes, I really don't. If you are asking me a question of opinion, then I don't think it is going to happen right away.

I think that the Banking Committee and the Congress has got time.

Senator **Sarbanes**. But if we don't make some changes, we remain at risk.

Mr. **Brady**. Absolutely.

Senator **Sarbanes**. You then say, "Minor changes in existing laws which would harmonize crucial intermarket elements are the key to avoiding a repeat of the October crisis. The cost is small, the benefit great."

And I find myself in agreement with those sentiments. Let me ask you this question. Is it fair to say that in a sense, the market was and still carries the risk of being manipulated in a way that some stand and reap significant benefits, but without serving the overall purpose or objectives of the market system?

Mr. **Brady**. We really didn't have any information that led to a conclusion that the market was being manipulated. What we have said, Senator, is that it grew—the practices that resulted in portfolio insurance, program trading, and the like grew geometrically. You have to realize that the trading in futures started in 1982. The technological revolution that put a screen everywhere in the world and all over the United States where you can see stock prices—you can go to any retirement village in the United States, turn on a channel, and you will get stock quotes

That is all very new. So I think it was really something that grew quicker than we had the understanding to evaluate. So I don't see manipulation. There probably is. There always is in markets, whether it is used car markets or stock markets or groceries. There may be some manipulation. But we didn't see that. What we saw was geometric growth in new instruments that the Congress and the whole investment community in the country hadn't thought deeply about.

Senator **Sarbanes**. But if you start from the proposition that the markets are to provide an opportunity for people to invest their money, for capital to be raised to bring those elements together and therefore serve an economic purpose of expanding the Nation's production, it seems to me some of what is now going on in the market really has very little relationship to furthering those objectives. And it really represents the institution of systems where the more sophisticated, the ones with the quicker information and this ability to use the modern technology can turn a quick profit for themselves without making a contribution toward the broader objectives which the market is supposed to serve as it functions in our economy.

Mr. **Brady**. I agree, except that those institutions that did that trading that you have described is like Peanuts saying, "We've met the enemy and they are us." They are the pension funds which are the repository of the Nation's retirement wealth and the guarantee for its execution; mutual funds, too, which is individuals, a collection of individuals and the like.

Maybe I am being captious, but when I conjure up thoughts around the word "manipulating," I see some of the robber barons of the 1920's and 1930's operating. I don't think that was the case here. I think the truth of the matter is, it was our big repositories of individual wealth in a system that they really didn't understand.

Senator **Sarbanes**. Or in a system that has been structured to put a pressure on to use it in order to make this profit, even though the workings of those systems don't contribute to the overall functioning of the market.

I think one of the important elements to your recommendations, which I don't regard as radical or sweeping, but they are designed to check that aspect of the workings of the market, and to return it to its more, not only traditional, but its more justified role in our economic system. I mean if the markets are going to become a casino in which people can use this technology to gain an advantage, in which, for instance, the individual investor holds, what, two-thirds of the stock in the country, is completely out of the picture when a situation of this sort occurs, something is wrong with the way the system is working, is it not?

Mr. **Brady**. That is correct.

But when you get to the people that were taking advantage of what we have referred to as keyboard liquidity, in other words, a big institution hitting a keyboard and selling 25 million stocks in 30 seconds, it turns out that institution is a pension fund which is the repository of that same individual and small guy's retirement.

So I can't get on the bandwagon that says there was a whole lot of activity which was personally generated. Let me again state one statistic. In an ordinary day, the activity underlying the contracts on the Chicago exchanges is almost two times greater than the New York Stock Exchange. What we found out on the 19th was that it was identical, $21 billion in one market and $20 billion in the other.

And you start with 1982, Senator Sarbanes, as the beginning point in that thing. It simply grew. And now I think we ought to take a look at what we have got, make some relatively mild, not draconian changes. It just ought to be done.

Senator **Sarbanes**. My time is up.

Thank you very much, Mr. Chairman.

The **Chairman**. Chairman Brady, I asked you when I first started the questioning about whether or not this could be left to some extent to the present system to see if they could work it out. You suggested a period to do that.

I think we have to move a little more expeditiously. Perhaps you do, too. Later this afternoon, we will be hearing from Federal Reserve Board Chairman Greenspan, and tomorrow we will be hearing from the Chairman of the SEC and the Acting Chairman of CFTC.

What would be your reaction to my asking them to get back to us within 1 month, that is, by March 3, with a list of the actions they have taken in response to your Brady task force proposals as well as with specific legislative proposals, and to coordinate that effort with the Treasury Secretary?

Mr. **Brady**. I think you are on the right track. I am not sure I followed every piece of it, Senator Proxmire. Please, I am not backing off what we said. I just think we ought to get the people that are on the firing line to come up with the solutions. If they don't do it in some piece of time, let's do it for them.

The **Chairman**. That is exactly what I want to do. That is why I suggested that we pursue the other witnesses who appear, so that we can see what we have and see some basis for moving. It might be 6 months, or more, under those circumstances before a bill would get through the Senate, through the House, be signed by the President and so on.

But if we are going to move at all on this thing, it seems to me we have to accept the sharpest deadline we can and press as hard as we can for some kind of recommendations.

Mr. **Brady**. I would do that.

The **Chairman**. OK.

Now let me ask you this. You answered a very interesting answer that you gave to Senator Gramm about how the market rose to a higher level than could be justified on the fundamentals from 1900 to 2700, and how then it fell back and it was the volatility that you feel is disturbing, and that your mechanisms might help correct.

I would like to press you a little bit on how that linkage would really work out. One aspect of it that I think I understand, I think you have made clear, is that the existence of portfolio insurance led investors to be overconfident, thinking that they could always hedge their portfolio of stocks at a moment's notice. They, in fact, believed that stocks were less risky than subsequent events revealed them to be.

ACTIONS THAT CAUSED THE MARKET TO RISE AND FALL

If you could spell out what specific actions here pushed the market up, how it did it, and how it therefore brought the market down.

Mr. **Brady**. I think that the market structures that we had which were operative in 1987, and obviously to a lesser extent in 1986, although I think we cited a figure in our report that the amount of index funds under portfolio insurance went from $20 to $60 billion in roughly 1 year, so that it escalated pretty fast. But fundamentally, the thought on circuit breakers is if you say to somebody, circuit breakers are here, and here are what the circuit breakers are, and if you put too much pressure on the system they are going to shut, it seems to me that that fellow will then say, well, I don't want to get in that far. I am operating under a fiduciary responsibility. If someone tries to convince me that I have unlimited liquidity, then I am not going to be taken by that argument.

I see these circuit breakers. I see what happened in October 1987. I am not going to get in there again. I am not going to take that kind of a risk with the people's money that I am standing up for.

So I think with regard to circuit breakers, you are saying to a guy, this system has limitations. People talk about liquidity. Liquidity wasn't there in the fall of 1987, and because of the circuit breakers we have now put forward, it isn't there now. So if liquidity is what you want, don't get in so far that you can't get out when the circuit breakers trip off. So that is the reason for circuit breakers.

And I think that that would have done a lot to tamp down the rise from January to August 1987.

The **Chairman**. How about margin requirements?

Mr. **Brady**. With regard to margins, that is the other piece of the puzzle. Margins, in my view—I won't say this is shared by everybody—margins, in my view, control the volume of securities around. It is leverage in the system. It increases the amount the system turns. And I think that is very good, up to a point. But I say again, let's not let people get the idea that we have got a system that will allow a firetruck to back up to a garden hose.

So I say if you do two things, if you put the control of margins or the oversight of margins in one place, where somebody is able to do what Bill Martin described the Fed's role as, to take the punch bowl away when the party is getting merry, that you will control the volume of securities in the system. And if you take some action in coordinating circuit breakers, you will then say to everybody, this is not a market that I can dump enormous amounts of equities on anytime I feel like it by pushing a keyboard. Those two things make sense.

The CHAIRMAN. Very good. Thank you, sir.

Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

In today's New York Times in the financial section, you may have seen the story that is captioned "Big Program Trading Firms Unlikely to Cut Back Soon."

Have you had a chance to see that?

Mr. BRADY. Yes, I read it, Senator Riegle.

Senator RIEGLE. Well, I want to just take one paragraph out of it to use as a basis for a question to you. It is talking about the program trading activities by major investment companies and entities, and this particular reporter makes this statement, as follows:

> The simple fact is that some of the largest firms on Wall Street make enormous profits using stock index arbitrage, a form of program trading, to manage their own capital. To date, none of these big firms that actively use the strategy for their "house accounts" have said anything about abandoning the practice.
>
> Those big firms that have said they are stepping to the sidelines.

And we saw ads during the Super Bowl and in the newspapers, full-page ads by some companies, according to this writer here are "considered to be pikers in the arena." In other words, they are not the big players in that business. They have been sort of peripheral players.

Does that sheer level of program trading in stock index arbitrage which has grown up—I think this is part of this geometric explosion of new instruments in trading activity and so forth—does that level by itself bother you? Are you concerned about that? Or if we take these adjustments on the margin, we shouldn't really worry about just the sheer volume and growth of that kind of activity?

Mr. BRADY. I think if you take the action that we suggested on circuit breakers and volume, you will definitely decrease the swing and the volatility in the system.

Index arbitrage, in and of itself, is a normal activity. It simply takes values in one market, in Chicago and New York, and tries to, by transactions, make them equal. That is good.

Senator RIEGLE. I understand.

And you have no problem with that?

Mr. BRADY. I don't have a problem with that, no, because I think the thing that really did us damage on the 19th and 20th was the fact that the Dow Jones was selling at 1700 in New York and the equivalent index in Chicago was 1400. And that was because the index arbitrage mechanism broke down.

What you want, if you are going to have these two strong markets, what you need is a system that will make it work across markets.

And the second part of your question as to whether individual firms, what their activities were in the program trading, we didn't have the information to really fasten down on that. I think you could get it, but we didn't have it.

Senator **Riegle**. If we had more time, I would like to pursue that because I think it is an important issue and we haven't exhausted it by any means in this little exchange.

But let me go to something else that I am trying to make sense out of. That is, the rise of the institutional investor or the institutional block manager of a large number of shares, whether it be a pension operator or whatever. The data that has come out since in your report and other reports showed that a handful of major players, some mutual funds with stock redemptions, but others major pension managers and so forth, sold huge blocks of stock in a very short period of time. Millions of shares were going through in split seconds. And that was part of what the system couldn't tolerate, or at least increased the velocity certainly on the downside.

I am trying to fathom what this means in relationship to the individual shareholder who is sitting out there with some stocks and common stocks that they bought over the years and are thinking of maybe buying some more, maybe selling the ones that they have.

As we try to think about a system that accommodates that small individual shareholder versus these major stock controlling entities that are in there with these multimillion, sometimes tens of millions of dollars worth of trading blocks going through at a time, it seems to me that the market is changed fundamentally by that circumstance. In fact, I think now even stock equities are more and more being thought of as almost like commodities; that if somebody is sort of following a great big investment strategy, whether they are in or out of the stock markets or in or out of gold or in or out of foreign currencies or whatever, it starts to change—when they are that big, and they come in and out of the market that rapidly, they really create I think a lot of shock waves that is part of this new phenomenon.

Can you think aloud a little bit with us about that and try to help us understand that better?

Mr. **Brady**. I really think that nobody really understood what is portrayed in chapter 4 here, which is the way the market operated during the weeks of October. And nobody really had a very clear view that it might operate that way.

But if you are going to have large institutions who represent individuals be able to push a keyboard and liquidate or think they can liquidate enormous amounts of securities, you are going to have the kind of pyrotechnics that we had during that week.

Now, what we have said, what the task force in essence says, that is not good for the country; let's do something about that. Let's not change the whole system, but let's do some simple, not too stringent things, to slow the system down a little bit till we get a better look at it.

And I can completely sympathize with your view of the individual shareholder, and I think the evidence is, it is just talking evidence, that although the first reaction of the individual was like a Christmas sale, he saw prices down 30 percent, he came in and said, hey, that's good. IBM was selling at 140. At 108—that's a great company—I want to buy some of that. This is his first reaction. Since that time, with all the publicity that we have had, and maybe with the advent of some of the things that came out of this report, he is backing away. He says, I don't know whether I like this or not. I don't know whether I understand this. If I don't understand it, I don't know as I want to be part of it.

So I think what we have got to do is a repair job on that individual investor's understanding of what the marketplace is all about. When I completed my written statement to you, I said the cost is small, the benefit great. It goes directly to what you were talking about.

Senator **Riegle**. Thank you very much, Mr. Chairman.

The **Chairman**. Senator Dixon.

Senator **Dixon**. Nick, on several occasions here, some of my colleagues and friends, in their exchanges with you, have talked about the program trading question, the advertisements we all saw, and things of that character. I think that what may have been overlooked a little bit is your response to that where you correctly pointed out that these are not a bunch of robber barons. Essentially they are pension funds, protecting those who are involved in the pension fund.

For instance, General Motors I think is a $40 billion pension fund. Isn't that accurate?

And I think there are 895,000 participants in that pension fund, if I remember the number correctly, the vast, vast majority of those people are blue collar workers whose pension fund that they have invested in all through their considerable working lifetime is protected by the fund so that they will be able to enjoy the fruits of their labors during their retirement years.

Isn't that an accurate representation, or oversimplification maybe, of what occurs?

Mr. **Brady**. It is accurate.

Senator **Dixon**. Another thing you said that I thought was interesting, because I recognized it as my own personal experience—I am not a big investor in the market—that for the two-thirds of the individual investors we are talking about, there are some big boys out there, but a lot of them are folks like myself and others who buy some stock once in a while, put it in the safe deposit box, and it is there. They have invested in the long term. They hope that Anheuser Busch or whatever, Texaco or whatever company they are investing in, a long long time from now will have appreciated in value like their own historical experience and their daddy's experience was a long time ago.

Isn't that true?

Mr. **Brady**. Absolutely.

Senator **Dixon**. And those are the realities of the marketplace that this committee has to be concerned about.

INDUSTRY PARTICIPATION IN RESOLVING THE PROBLEM

I would ask you further, when my friend and colleague, the chairman of the committee, suggested that if we let the industry discuss this for 30 days and then come back here and undertake a whole bunch of activity, you had at first suggested 6 months.

With my limited understanding of this highly complicated matter we are trying to address here, I am very concerned about any suggestions that in 30 days we can accomplish some kind of a resolution of this tremendously complex problem in such a way that we can understand what the response mechanism by this committee ought to be.

Mr. **Brady**. Senator, perhaps I have muddied up the water a little bit. What I really have in mind is to say to the participants in the industry, look, we have a problem here. Now, you understand it better than we do. Come forward with some suggestions.

I would assume that some of those suggestions might be to do exactly as we have suggested in this report here. But I think it is important to listen to what industry participants have to say, but if they don't have good answers to some of the questions you are asking, then I would move.

How you do that, I am not suggesting that you just talk about this for 6 months. If there is some way you could write a law which gives the industry and the participants a chance to come up with solutions which you would agree to at that point in time, I would do that. If not, I would go right ahead and implement what we have suggested.

Senator **Dixon**. The only observation I wanted to make—and you are an old friend, a distinguished Member of the Senate in your own right in your time—I am now in the beginning of my eighth year on this committee. Throughout that time, we have dealt with the whole problem of the financial community out there. All kinds of solutions have been suggested. Nothing at all yet has been done.

I suspect maybe nothing will be done in this session of the Congress as well. My information is that historically for a long, long time before I got here, they were talking about that. So, quite interestingly, in an area where every one of us is in total agreement in the entire committee that there is a tremendous problem, we have never been able to find the correct solution, I would hope that we don't suggest that we can find the solution to this even more complicated problem in 30 days.

And that is the point I wanted to see whether you had some agreement with.

Mr. **Brady**. I think it is complicated. I will leave it up to the Banking Committee to decide how long that ought to be. However, I think that this problem is serious, and I think something ought to be done about it, and I would not wait too long.

Senator **Dixon**. The final question I have is, on page 16 of your report, you have the graph that I think is very, very interesting, about the question of takeover stock vis-a-vis the S&P 500 Index as it relates to the experiences immediately prior and immediately subsequent to the October 19 crash.

Is it a fair representation of what that shows on page 16 that in fact takeover stocks relative to the market as a whole dropped maybe $12 or $13 or $14 more? Or is that an exaggeration of what I read here? So that in that one isolated area at risk in our market investments in our society, that one area alone constitutes—is it $13 or $14, that much?

Mr. **Brady**. Is it that much?

Senator **Dixon**. The graph looks that way to me.

Mr. **Brady**. I am not sure whether it is dollars or percent, Senator Dixon.

Senator **Dixon**. Well, as a percentage. As a percentage, then, it is 14 or 15 percent.

Mr. **Brady**. I don't think we should make too much out of this chart. We were trying to give the readers an anatomy of what happened around October 19. This is what happened on the Wednesday preceding the Monday. It is a very particular small part of the landscape and I think it is a mistake to dwell on it too much. But it was something that started the thing going.

Maybe if we had started on Tuesday, there would have been a better idea; there would have been something else going on that day. But on Wednesday, that is what happened. Because of the arbitrage's ability to get out of the stocks that they held, there was no way that individual market operators could get out ahead of people who knew that they were going to have to get out.

Senator **Dixon**. If I may in conclusion—and my time is running out, but I think the Chair will indulge me—your report shows, common knowledge suggests that in that marketplace you had a market that was already too high. You would agree with that as an expert. You had the debt problem that we have all been dealing with for years. It is on the front page of every newspaper and part of the media comment on the evening news every night in America. You had the trade deficit. You had the tax situation in the House Ways and Committee. You had the takeover problem we have not yet solved.

All of that mix was out there and had been out there for a substantial period of time. That is a factual thing that is a reality that is part of the thing that occurred.

Is that not true, Nick?

Mr. **Brady**. It certainly is true that those factors were out there. I will agree with that.

Our report found, the task force report, that it was the market mechanisms and not any one of those factors or a slight combination of them that really was responsible.

If you look at chapter 4 and see that at certain hours on the New York Stock Exchange, and in Chicago as well, institutions were responsible for 80 percent of the sales, institutions under portfolio insurance. You have to look at that fact and say what is this all about? Are we are worried about the Persian Gulf and twin deficits, or is this some kind of a weird way that the market is operating? I think it is the latter.

The **Chairman**. Senator Sarbanes.

Senator **Sarbanes**. I just want to follow up on that point because I think it is very important to establish that the conclusion of your report is that what took place is related to the market mechanisms. And whatever one may think of economic factors, broad economic factors that would impact on the market, your conclusion is that it is clear in this instance these market mechanisms are what introduced the volatility into the market and resulted in the incredible drop in prices.

Is that not correct?

Mr. **Brady**. That is correct.

Senator **Sarbanes**. Which, of course, would suggest that at a minimum, you ought to address the market mechanisms. You also ought to address these other broader economic factors and we have been worrying about those and trying to get them into line.

But even if they were addressed, the broad economic factors, if the market mechanisms were left in place, you could have a repeat of what occurred in October, could you not?

Mr. **Brady**. Absolutely. I think there would be other reasons for it. I mean the mechanisms were left in place. In my opinion, there would have been some other group of reasons, other than the ones we have described—arbitrage, stocks plummeting down, and the like.

Senator **Sarbanes**. The other point I want to make, and I probably used the word "manipulate" in a confusing way before, if the mechanisms are available, wouldn't a rational operator in the market, if he thought he could use the mechanism for advantage, in effect be compelled to do so?

I mean why would he refrain from doing so if the mechanism is available to him, if by using it he can turn a profit?

Mr. **Brady**. Well, I think that question implies the answer. He very well might do that.

Senator **Sarbanes**. In other words, what I am saying is that you have got to, if you see the dangers involved in these mechanisms, to address that danger you have to, in effect, block the mechanism or effect the mechanism. You are not going to get it through self-restraint, because it does not behoove the interest of a particular decisionmaker to restrain himself if the mechanism is available and he can use it in order to turn a profit.

Mr. **Brady**. I think that is right, Senator Sarbanes. In the case of portfolio insurance, I think it is largely self-correcting. There was a feeling about, among large investment pools, that there was instant liquidity. Therefore, there was no penalty for getting in as far as you wanted if you could push a keyboard and get out in 35 seconds.

So in that particular case, that is an exact example of it. Now, I don't think that they think that that is the reality going forward. I don't think it will happen again, although you may have the development—portfolio insurance works for a limited number of people, like a fire in a theater or a movie house. If there are 10 people in the house, you can all get out the exit. If the theater is full, you are going to have a bunching up at the door.

So in my mind, if you leave the market mechanisms alone, not now, but sometime in the next year or so, you are going to have similar kinds of things happen.

The **Chairman**. What do you think the impact of this has been on the general public confidence in the market? Assuming it has had a negative impact, what are the implications of that over the long run?

Mr. **Brady**. I don't really know, but I don't want to do it again.

Senator **Sarbanes**. Thank you.

The **Chairman**. Well, thank you very, very much, Senator Brady. You have done a superlative job. You are not only a great former Senator, investment banker, but a superb witness.

Mr. **Brady**. Thank you for the opportunity to be here today.

The committee will stand in recess until 2:30 when we will hear from the Chairman of the Federal Reserve Board, Alan Greenspan.

[Whereupon, at 12:47 p.m. the committee stood in recess, to reconvene at 2:30 p.m., this same day.]

"BLACK MONDAY," THE STOCK MARKET CRASH OF OCTOBER 19, 1987

TUESDAY, FEBRUARY 2, 1988

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 2:30 p.m., in room SD-538 of the Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Riegle, Sarbanes, Dodd, Dixon, Sasser, Sanford, Graham, Garn, Hecht, Gramm, Bond, and Chafee.

OPENING STATEMENT OF CHARMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

This afternoon our hearings are on the Presidential Task Force on Market Mechanisms continue with Chairman Alan Greenspan of the Federal Reserve Board as our witness.

The Federal Reserve Board has a critical role in our financial system. It is the country's central bank. It is the lender of last resort. It is the administrator of margin requirements with respect to stock purchasers which determine the Nation's monetary policy. It is the source of liquidity in our system. It regulates many of the Nation's banks, and it has been suggested in the report of the Presidential Task Force on Market Mechanisms that the Fed should be the overall coordinator of regulations for one national financial market that the Presidential Task Force has found to lack coordinated regulation.

Chairman Greenspan, you and your colleagues on the Board, and especially Mr. Corrigan in New York and Mr. Keene in Chicago played a critical and essential part in preventing the stock and financial markets in October from becoming a much more serious national economic disaster.

We look forward to your testimony and your recommendations for and against the conclusions and recommendations of the President's Task Force.

Senators Dixon, Sasser, and Chafee have submitted statements for the record and without objection they shall be inserted.

FEBRUARY 2, 1988 (AFTERNOON)

STATEMENT OF SENATOR ALAN DIXON

SENATE BANKING COMMITTEE OVERSIGHT HEARINGS
ON
THE EVENTS IN THE SECURITIES MARKETS DURING OCTOBER, 1987

MR. CHAIRMAN, I AM PLEASED TO BE HERE THIS AFTERNOON AS THE COMMITTEE CONTINUES ITS OVERSIGHT HEARINGS INTO THE CAUSES OF LAST OCTOBER'S MARKET CRASH. WE HAVE THE DISTINGUISHED CHAIRMAN OF THE FEDERAL RESERVE BOARD, ALAN GREENSPAN, BEFORE THE COMMITTEE; I AM SURE HIS COMMENTS WILL BE BOTH INFORMATIVE AND HELPFUL.

THE FEDERAL RESERVE PLAYS A KEY ROLE IN THE MAINTENANCE OF THE INTEGRITY OF OUR FINANCIAL MARKETS. THE FEDERAL RESERVE IS THE LENDER OF LAST RESORT, SUPPLYING LIQUIDITY WHEN THAT COMMODITY IS ABSOLUTELY ESSENTIAL. THE FEDERAL RESERVE CONTROLS

THE MONEY SUPPLY, AND INDIRECTLY INTEREST RATES, A FACTOR THAT HAS A POWERFUL IMPACT ON OUR EQUITY MARKETS. IT IS ALSO THE REGULATOR OF MARGINS ON STOCK PURCHASES.

IT IS IMPORTANT TO REMEMBER, AS WE START THESE HEARINGS, THAT THERE IS A SUBSTANTIAL DIFFERENCE BETWEEN MARGINS ON STOCKS AND FUTURES MARGINS. IN FACT, WHEN DISCUSSING FUTURES, MARGIN IS A TERM THAT IS NOT AT ALL DESCRIPTIVE OF WHAT IS ACTUALLY GOING ON.

THERE ARE THOSE WHO SAY THAT MARGINS ON STOCK PRICES AND FUTURES MARGINS SHOULD BE THE SAME. IN MY VIEW, HOWEVER, THAT POSITION REFLECTS A FUNDAMENTAL MISUNDERSTANDING OF THE DIFFERING ROLE MARGIN PLAYS IN THE TWO MARKETS.

ACCORDING TO THE FEDERAL RESERVE'S 1984 REPORT ON MARGINING, "MARGIN PUT UP IN A SECURITY TRANSACTION SERVES AS A DOWNPAYMENT ON THE PURCHASE . . . THUS, CREDIT IS INVOLVED AND A TRANSFER OF PROPERTY OWNERSHIP OCCURS. MARGIN POSTED IN A FUTURES TRANSACTION, ON THE OTHER HAND, INVOLVES NO EXTENSION OF CREDIT AND NO TRANSFER OF PROPERTY OWNERSHIP. INSTEAD THE PARTICIPANT

ENTERING INTO A FUTURES CONTRACT COMMITS TO MAKE A PURCHASE OR SALE UNDER SPECIFIED TERMS AT SOME DATE IN THE FUTURE."

THE DIFFERENCE BETWEEN STOCK MARGIN AND FUTURES MARGIN MAY BECOME EASIER TO UNDERSTAND BY THINKING ABOUT THE PURCHASE OR SALE OF A HOME. STOCK MARGIN IS MUCH LIKE THE DOWNPAYMENT ON THE HOUSE. FUTURES MARGIN, HOWEVER, IS LIKE AN ESCROW PAYMENT ON A HOME. IT IS MERELY A PERFORMANCE BOND STATING THAT THE BUYER OR SELLER WILL BE THERE ON CLOSING DAY TO PERFORM HIS OR HER PART UNDER THE TERMS OF THE CONTRACT.

THIS DISCUSSION ONLY COVERS INITIAL MARGIN. WHAT IS OFTEN FORGOTTEN IS THAT ON A FUTURES EXCHANGE, THERE IS A SECOND KIND OF MARGIN, VARIATION MARGIN, THAT IS ALSO REQUIRED. THIS SECOND REQUIREMENT EFFECTIVELY RESULTS IN MARGIN REQUIREMENTS INCREASING AS VOLATILITY INCREASES. IT THEREFORE AUTOMATICALLY WORKS TO DAMPEN MARKET VOLATILITY.

THREE OTHER POINTS ARE ALSO WORTH NOTING. FIRST, IN A STOCK TRANSACTION, ONLY THE BUYER PUTS UP MARGIN, WHILE IN A FUTURES TRANSACTION, BOTH THE BUYER AND THE SELLER MAKE MARGIN PAYMENTS.

SECOND, WHILE I HAVE HEARD A LOT OF COMMENTS ABOUT THE 50% MARGIN REQUIREMENT ON STOCK, PROFESSIONAL STOCK INVESTORS -- THOSE MOST APT TO BE INVOLVED IN SPECULATION -- CAN ACTUALLY BORROW AT 25% MARGIN, ACCORDING TO THE BRADY REPORT. OTHER SOURCES INDICATE THAT THE ACTUAL MARGIN ON STOCK PURCHASES CAN BE AS LOW AS 5%, OR EVEN LOWER, UNDER SOME CIRCUMSTANCES. I WOULD HOPE THE FEDERAL RESERVE COULD HELP THE COMMITTEE DETERMINE EXACTLY WHAT STOCK MARGINS REALLY ARE.

FINALLY, THERE IS A CRUCIAL DIFFERENCE BETWEEN THE WAY FUTURES TRANSACTIONS AND STOCK TRANSACTIONS ARE CLEARED. FUTURES ARE CLEARED OVERNIGHT, WHILE STOCK TRANSACTIONS CLEAR AT THE END OF FIVE BUSINESS DAYS, OR SEVEN OR MORE CALENDAR DAYS. COMMON SENSE TELLS US THAT A SHORTER CLEARING TIME MUST BE LESS RISKY, AND, THEREFORE, THAT A LOWER MARGIN REQUIREMENT IS APPROPRIATE FOR FUTURES TRANSACTIONS.

COMMON SENSE IS NOT ALWAYS CORRECT, HOWEVER. FOR EXAMPLE, COMMON SENSE SEEMS TO SUGGEST THAT LOWER FUTURES MARGINS, BECAUSE THEY INVOLVE GREATER LEVERAGE THAN STOCK TRANSACTIONS, CAN LEAD

TO GREATER VOLATILITY. HOWEVER, IT IS NOT AT ALL CLEAR THAT ACTUAL HISTORICAL MARKET EVIDENCE BACKS UP THAT ASSERTION. FOREIGN MARKETS, IN MANY CASES, ROSE HIGHER THAN THE U.S. STOCK MARKET, AND FELL AS FAR OR FURTHER, EVEN THOUGH THESE MARKETS OFTEN DO NOT HAVE FUTURES CONTRACTS ASSOCIATED WITH THEM. I HOPE THE COMMITTEE WILL LOOK INTO THIS ISSUE VERY CAREFULLY BEFORE TAKING ANY ACTION.

THERE IS A LOT MORE I COULD SAY ABOUT MARGINS, AND I THINK THERE IS A LOT MORE THAT NEEDS TO BE SAID. HOWEVER, IN THE INTEREST OF TIME I WILL CONCLUDE BY URGING THE COMMITTEE TO KEEP THE DIFFERENCES BETWEEN FUTURES MARGINS AND STOCK MARGINS CLOSELY IN MIND AS WE ALL LISTEN TO THE WITNESSES, AND AS WE CONSIDER OUR RESPONSE TO LAST OCTOBER'S MARKET CRASH. A PROPER UNDERSTANDING OF THE MARGIN ISSUE IS ESSENTIAL IF WE ARE TO FIND A REASONABLE AND WORKABLE PROPOSAL THAT DOES NOT CREATE MORE PROBLEMS THAN IT SOLVES.

Jim Sasser

REMARKS OF SENATOR JIM SASSER, SENATE BANKING COMMITTEE, FEBRUARY 2, 1988 2.30 PM.

MR. CHAIRMAN, DR. GREENSPAN DESERVES GREAT CREDIT FOR HIS HANDLING OF AN EXTRAORDINARILY SERIOUS SITUATION ON OCTOBER 20TH. HE APPEARS TO HAVE READ HIS HISTORY. HIS ACTIONS IN ENSURING THAT THERE WAS ENOUGH LIQUIDITY IN THE FINANCIAL SYSTEM DID MUCH TO RESTORE CONFIDENCE AND PROBABLY PREVENTED A REPEAT OF FIFTY YEARS AGO.

INDEED, I AM PARTICULARLY IMPRESSED THAT ONE OF HIS FIRST ACTIONS UPON ASSUMING THE CHAIRMANSHIP OF THE FEDERAL RESERVE WAS TO CREATE A CONTINGENCY PLAN FOR A STOCK MARKET COLLAPSE. NOT ONLY DID DR. GREENSPAN ACT RESPONSIBLY UNDER GREAT PRESSURE, BUT HE WAS PREPARED. UNFORTUNATELY, I DON'T BELIEVE THAT THAT IS NECESSARILY TRUE FOR THE AGENCY WITH THE DIRECT RESPONSIBILITY FOR REGULATING THE SECURITIES MARKETS.

I AM ALSO IMPRESSED THAT WHILE HE STEPPED UP TO THE PLATE AND PERFORMED ADMIRABLY ON OCTOBER 20TH, DR. GREENSPAN'S FED IS NOT ANXIOUS TO ASSUME THE ROLE OF THE INTERMARKET OVERSIGHT AGENCY THAT THE BRADY COMMISSION WOULD LIKE TO SEE.

I THINK THAT SUCH AN AGENCY COULD WIELD ENORMOUS POWER: IF ONE IS CREATED, IT MUST BE FULLY ACCOUNTABLE.

THANK YOU, MR. CHAIRMAN. DR. GREENSPAN, I AM LOOKING FORWARD TO YOUR TESTIMONY.

SPEECH BY
SENATOR JOHN H. CHAFEE
TO
SENATE BANKING COMMITTEE
ON MARKET CRASH/INTERNATIONAL FACTORS
(FEBRUARY 2, 1988)

MR. CHAIRMAN. LET ME ALSO WELCOME CHAIRMAN GREENSPAN BEFORE US TODAY TO DISCUSS THE MARKET COLLAPSE AND WAYS TO AVOID ITS REOCCURRENCE.

MY STATEMENT THIS MORNING ADDRESSED THE IMPORTANCE OF THE INDIVIDUAL INVESTORS TO OUR CAPITAL MARKET SYSTEM, AND THE TRAGEDY IF THEY WERE TO LEAVE.

MY OTHER MAJOR CONCERN IS ENSURING AMERICA'S ABILITY TO COMPETE INTERNATIONALLY. BRIEFLY STATED, WE MUST BE CAREFUL NOT TO QUICKLY IMPOSE SUCH DRACONIAN LEGISLATIVE SOLUTIONS THAT WE RUN THE RISK OF SEEING A SIGNIFICANT AMOUNT OF TRADING IN SECURITIES AND DERIVATIVES DRIVEN ABROAD.

I FULLY UNDERSTAND THAT THE U.S. SECURITIES MARKETS ARE THE MOST LIQUID, FAIREST PRICED, AND QUICKEST SETTLING IN THE WORLD. BUT IT IS EASY TO UNDERESTIMATE THE ABILITY OF OTHERS TO QUICKLY REPLICATE OUR ACHIEVEMENT. OUR CURRENT TRADE IMBALANCE IS EVIDENCE OF THAT. AS INFORMATION TECHNOLOGY BECOMES SIMILAR AROUND THE WORLD, AND GLOBAL TRADING A COMPLETE REALITY, QUESTIONS OF LIQUIDITY, PRICING AND SETTLEMENT BECOME CRITICAL. THESE THEN

BECOME THE AREAS WHERE FOREIGN EXCHANGES CONCENTRATE THEIR EFFORTS.

WE ALSO HAVE THE BENEFIT OF THE EARLIER EXAMPLE OF FEDERAL IMPOSITION OF THE INTEREST EQUALIZATION TAX, THAT LED TO THE CREATION AND EXPLOSIVE GROWTH OF THE EURODOLLAR MARKET ABROAD.

IF WE ARE TO IMPROVE COORDINATION THROUGH HARMONIZING INTERMARKET ACTIVITIES, STRENGTHEN CLEARING ABILITIES, AND IMPROVE LIQUIDITY, EVEN TO APPLY REASONABLE MARGINS AND CIRCUIT BREAKERS, THIS CAN ONLY ENHANCE OUR MARKETS AND IMPROVE THEIR REPUTATION FOR SAFETY AND SOUNDNESS. BUT WERE WE TO SLAP 50% MARGINS ON THE FUTURES MARKET AND INSTITUTE TRADING HALTS AND PRICE LIMITS TOO READILY, THIS MAY CAUSE TRADING TO SHIFT ABROAD. THIS MAY NOT OCCUR IMMEDIATELY, AS THE INTERNATIONAL MARKETS ARE STILL IN A SHAKEOUT PHASE. THEY ARE ALSO WAITING TO SEE WHAT THE OTHERS WILL DO TO REMEDY THE CURRENT SITUATION. THEY WILL ALL TAKE THEIR CUE FROM US. AND IF WE ALLOW COMPETITIVE ADVANTAGE TO BE TAKEN, WE MAY BE SORRY FOR IT LATER.

FOR THESE ARE NOT ONLY NEW YORK JOBS AND CHICAGO JOBS AT STAKE. THERE ARE RHODE ISLAND JOBS, AND THOSE OF OTHER STATES--IN SHORT AMERICAN JOBS.

ACCORDINGLY, WE MUST BE SENSITIVE TO THESE REALITIES AS WE DRAFT ANY LEGISLATION.

The CHAIRMAN. Any other statements?

[No response.]

The CHAIRMAN. If not, we'll go right ahead, sir.

STATEMENT OF ALAN GREENSPAN, CHAIRMAN, BOARD OF GOVERNORS, FEDERAL RESERVE SYSTEM, WASHINGTON, DC

Chairman GREENSPAN. Thank you very much, Mr. Chairman, members of the committee.

I appreciate this opportunity to appear before the Banking Committee to address questions about the Federal Reserve's responses to the turbulence in financial markets last October, the functioning of our financial markets during that period and proposals for structural and regulatory reforms.

During the stock market crash, and in the days following, the Federal Reserve took a number of actions to deal with emerging problems and restore confidence.

Our purpose was to limit any damage from the collapse in financial markets on the economy.

History teaches us that central banks have a crucial role to play in responding to episodes of acute financial distress. Before the founding of the Federal Reserve, the early stages of stock market crashes or their equivalent were compounded by a sharp escalation of short-term interest rates and a reduction in credit availability. Such rates were a product of natural market reactions to the dramatic increases in uncertainty that accompany such episodes.

There certainly can be a rational component underlying the heightened demand for liquidity and increased reluctance to lend to private borrowers.

A stock market crash can patently increase the credit risk involved in lending to certain borrowers, but there can be and almost always is an exaggerated market reaction as well, based on little hard evidence that builds on itself and ultimately affects borrowers whose creditworthiness has not been materially impaired by the drop in equity values.

The Federal Reserve adopted a strategy following October 19 aimed at shrinking irrational reactions in the financial system to an irreducible minimum. By demonstrating openly our determination to meet liquidity demands, we could, in practice, reduce those demands to the extent they arose from exaggerated fears. Gradually, risk premiums for private borrowers subsided, suggesting that the flight to quality had abated; however, there remained peer-based demands for liquidity generated temporarily in the course of the financial turmoil, and there were also understandable and reasonable demands for excess reserves at depository institutions whose reserve management turned appropriately more cautious.

In addition, demand deposits bulged following the stock market fall, probably in conjunction with the surge in financial transactions. The Federal Reserve supplied extra reserves to accommodate these needs. By helping to reduce irrational liquidity demands and accommodating the remainder, the Federal Reserve avoided a tightening of overall pressures on reserve positions and an increase in short-term interest rates.

In fact, we went even further and eased policy moderately following the stock market collapse, in light of the greater risk to continued economic expansion. At the same time, I should add that it was very important that our actions not be perceived as merely flooding the market with reserves. That would not have addressed the problem. We undertook open market operations in a measured and calibrated way. Haphazard or excessive reserve creation would have fostered a notion that the Federal Reserve was willing to tolerate a rise in inflation which could, itself, have impaired market confidence. We were cautious to attack the problem that existed and not cause one that didn't.

Our reactions to provide liquidity apparently prevented sharp interest rate hikes observed in earlier crisis periods. Interest rate spreads have come back more into line and the market function appears to have returned toward more normal conditions. Although it appears that the acute crisis period has passed, markets remain quite sensitive and could react strongly to developments that seem to portend more market instability.

We find the Brady task force analysis of the causes of the stock market break particularly instructive and subscribe to its general lines. We differ in part on some of their recommendations for reform. A central question is the cause of the market collapse and its suddenness. Only if we understand why it happened, can we gain insights into how the structure of markets for equities and their derivatives can be improved. Not only was the stock price break very large, but it was compressed into a very short span of time. We can point to a number of price declines in our history of a magnitude similar to last October but none have been as rapid.

Also the plunge was an international phenomenon. The drop was of fairly uniform severity across the major equity markets affecting those with well developed and less developed derivative markets.

Similarly, prior to the drop, the market had run up to very high levels. The bull market from 1982 onward was nurtured by a favorable economic setting for businesses which investors came increasingly to view as likely to be sustained. In particular, inflation expectations were greatly reduced over this period, even as the economic expansion continued; however, stock prices finally reached levels which stretched to incredulity expectations of rising real earnings and falling discount factors.

Something had to snap. If it didn't happen in October, it would have happened soon thereafter.

The immediate cause of the break was incidental. The market plunge was an accident waiting to happen. Measures of real rates of return on equity investments indicated that such returns were at historically low levels last summer, a situation that in the past had been restored to more normal levels, either by a subsequent sharp increase in earnings or a pronounced drop in share prices. In the event, we got the latter. Probably contributing to high share prices were efforts by investors previous to October to extend their cash equity positions on the thought that the availability of liquid markets for derivative instruments would enable them to promptly trim their exposure and limit losses, should they fear a turndown in prices.

In essence, there was an illusion of liquidity that likely encourage larger equity positions on the part of many investors. Of course, while an individual investor can, in principle, reduce exposure to price declines, the system, as a whole, with rare exceptions, cannot.

Modern technology, coupled with the greater presence of sophisticated institutional investors, undoubtedly contributed to the suddenness of the October drop. Through modern telecommunications and information processing, investors can follow events as they unfold and react very promptly. What formerly took hours or days can now be done in seconds or minutes. Moreover, institutional investors have taken on a major role in the market for equities and derivative products, accounting for about two-thirds of trading volume, and these sophisticated investors are capable of reacting almost instantaneously to information as it becomes available.

Modern technology, along with major institutional presence in the market, implies that an enormous volume of buy and sell orders can be sent to the markets at any moment, leading to very sudden pressures on prices.

Furthermore, sharp downward price moves by themselves, such as those occurring last October, can act to heighten uncertainty in the markets and efforts to disengage, thereby compounding selling pressures. Under these circumstances, many potential buyers became reluctant to enter the market as the sharp price move outside the range of normal experience leads to doubts about underlying values.

In other words, a rapid decline in prices can act to raise the uncertainty premium in share returns, adding at least for awhile to downward price momentum and pressures on execution capacity.

In earlier periods of large market declines, such as the panic of 1907, news of the initial drop reached investors more slowly, for many, the next day. As a consequence, price declines were spread over a longer period of time and some of the trauma caused by a sudden price break and the corresponding pressures on system capacity was thus avoided.

On top of these factors, system capacity became an influence on investor behavior. As investors came to recognize that the capacity of the system to execute trades was faltering, they sought to get out while they could.

The confusion and uncertainty about execution last October likely contributed to uncertainty premiums in share returns and thus to additional downward pressure on prices. The emerging incoherence between the price of stocks, stock index futures and options last October, also contributed to the uncertainty premiums and the downward pressure on prices.

There is, of course, only one valuation process in these markets, that being the underlying value of the primary claims to corporate ownership.

Index futures and options are claims on the primary claims and can have value only to the extent the underlying stocks have value. In fact, index futures and options merely gross up the demand and supply for equity-related products.

Every such contract has equal outstanding long and short positions, the net of which is, of necessity, a wash.

Stocks, in contrast, reflect a net long position representing the total value of the combined equity and derivative products. In normal circumstances, when markets are functioning efficiently, arbitrage keeps the prices of these so-called "derivative instruments" in line with equities, but under the strains of last October, the individual markets for these instruments were fragmented, generating considerable price disparities. These disparities were able to persist for extended periods of time, adding to confusion and doubt, owing to a breakdown of the arbitrage process associated with the withdrawal and execution problems.

In short, the initial rapidity of the price correction to an overvalued market and a faltering execution capacity sharply raised risks and uncertainty premiums which contributed to historic declines in prices. While much of the attention given to the performance of the equity and derivative markets last October has been on the strains and weaknesses displayed, we must nonetheless not lose sight of the fact that we came through the crisis remarkably well, given what happened. No major brokerage firms failed. Unprecedented margin calls by the futures clearing houses were met by their members and stock prices reached a new less vulnerable trading range shortly after the plunge.

We must recognize that some of the factors contributing to the October break cannot realistically be corrected by public policy. In part, the sharpness of the October decline reflected modern telecommunications and information processing systems, but this technology is here to stay. We must learn to adapt to this development, as we have to so many others that have advanced our society.

Similarly, we do not want to lose sight of the important role that professional institutional investors play in managing our retirement programs and the assets of nonprofit institutions, though their very sophistication and rapid response accelerated price moves in October.

We must be aware that demands on the system could again exceed execution capability and that remedies may well be needed that expand capacity or that establish an orderly adjustment process, once capacity limits have been reached.

Execution capacity expansion, which rarely comes into play, however, may imply a misuse of resources. As a consequence, the Brady task force recommendation for circuit breakers has some appeal.

The recent proposal of the New York Stock Exchange to place temporary price limits on individual stocks could prove helpful in assessing the viability of price limits.

Price limits and other circuit breakers must be viewed as being inherently destabilizing, however, but they may be the least bad of all the solutions. When orders exceed execution capacity, the system will break down.

The only question is, whether it is better for it to take the form of a controlled disruption or leave the solution to a haphazard set of forces.

On the matter of regulatory structure, the Board in 1985 reviewed the appropriate form of margin regulation and suggested that margins on stocks and derivative instruments be set by self-regulatory organizations subject to Federal oversight.

It was thought that the SRO's were in the best position to determine the appropriate level of margin and had the incentive to do so to protect the integrity of their markets.

It also was thought that Federal oversight would be appropriate to assure coordination of margin setting across cash, futures and options markets and a direct Federal role might be needed in emergency situations.

The CFTC and SEC were viewed as playing an important role in Federal oversight, giving their knowledge and expertise in the markets that they regulate. The Federal Reserve Board expressed its willingness to be a part of such a system.

We have reviewed the matter of Federal oversight again and believe that such a concept continues to be appropriate.

We appreciate the confidence that the Brady task force has implicitly placed in the Federal Reserve and also its reasons for recommending that a single agency have full intermarket oversight authority; however, we seriously question this recommendation.

To be effective, an oversight authority must have considerable expertise in the markets subject to regulation, something that the CFTC and SEC have developed over some time.

Moreover, were the Federal Reserve to be given a dominant role in securities market regulation, there could be a presumption by many that the Federal safety net applicable to depository institutions was being extended to these markets and the Federal Reserve stood ready to jump in whenever a securities firm or clearing corporation was in difficulty.

Coherence of Federal oversight over the market for equity instruments could be achieved through merging the relevant portions of the CFTC with the SEC or by a joint oversight authority, including the SEC, CFTC and perhaps the Federal Reserve or the Treasury.

We continue to view the achievement of consistent margins across various instruments as being appropriate and that the Federal oversight authority would be well positioned to accomplish this.

On the related matter of clearing mechanisms, we concur with the spirit of the Brady task Force, that improvements in the clearing system are needed, based on a more unified approach. The relation between margins and clearing suggests a role for Federal oversight in the intermarket clearing process.

Finally, the Brady task force proposes that detailed trading information be collected on a regular basis for purposes of monitoring market developments and identifying market abuses while recognizing the potential value of such information.

My colleagues on the Board and I oppose such data collection, except on a voluntary basis. The right to privacy is important for a free society, and we believe that the case for collecting such information must be a compelling one, which this one does not seem to be, in our judgment.

Thank you, Mr. Chairman.

[The complete prepared statement of Chairman Greenspan follows:]

Testimony by
Alan Greenspan

Mr. Chairman, I appreciate this opportunity to appear before the Banking Committee to address questions about the Federal Reserve's response to the turbulence in financial markets last October, the functioning of our financial markets during that period, and proposals for structural and regulatory reforms.

Federal Reserve Response to the October Crisis

During the stock market crash, and in the days following, the Federal Reserve undertook a number of actions to deal with emerging problems and restore confidence. Our purpose was to limit any damage from the collapse in financial markets on the economy.

History teaches us that central banks have a crucial role to play in responding to episodes of acute financial distress. Before the founding of the Federal Reserve, the early stages of stock market crashes or their equivalent were compounded by a sharp escalation of short-term interest rates and a reduction in credit availability. For example, during the Panic of 1893, rates on call loans to brokers in New York City were quoted at the extraordinary level of as much as 74 percent per annum; the rates on prime commercial paper reached 18 percent. Interest rate quotes during the Panic of 1907 were similar. Moreover, these rates were for the most part purely formal quotes; even at such high interest rates, very little money was actually forthcoming from nervous lenders.

These rates are a product of natural market reactions to the dramatic increases in uncertainty that accompany such

episodes. Fearful people tend to withdraw; they pull back; they endeavor to become safer and more liquid. Savers and lenders attempt to disengage from markets, especially those involving risk-bearing instruments, and look for principal preservation rather than capital gains and earnings potential. This increased demand for liquidity and safety is a phenomenon that in recent years has often been described as a flight to quality. At the same time, some private borrowers might find that their credit needs have been enlarged by a stock market crisis, especially the securities dealers who need to finance a larger inventory of equity shares acquired from a panicky public. Others may increase their borrowing just to have a larger cushion of cash on hand, given the financial uncertainties.

This combination of supply and demand factors can add up to a situation in which private borrowers could have difficulty obtaining credit, or at least find it very much more expensive. Short-term interest rates on private instruments and the cost of borrowing from intermediaries could rise sharply, compounding the crisis and increasing the potential for major damage to the economy and financial markets.

There certainly can be a rational component underlying the heightened demand for liquidity and increased reluctance to lend to private borrowers. A stock market crash can patently increase the credit risk involved in lending to certain borrowers, such as those dealers holding large inventories of equity relative to their capital, or firms planning to retire debt by selling shares of stock, or companies that may experience reduced demand for their products as a result of the decline in equity prices. But there can be, and almost always is, an exaggerated market reaction as well, based on little hard evidence, that builds on itself and ultimately affects borrowers whose creditworthiness has not been materially impaired by the drop in equity values. This irrational component of the demand for liquidity may reflect concerns that the crisis could affect the financial system or the economy more generally, spreading beyond the individual participants directly involved. It also can be a strong reaction to heightened uncertainties, before firm information becomes available on which potential borrowers have been weakened and which still are sound.

The irrational aspect of the flight to liquidity and quality is similar in some respects to a run on a bank that is fundamentally sound. In the days before deposit insurance, banks attempted to fend off such runs by putting cash in the front window. By reassuring depositors that ample supplies were on hand, the run might be discouraged from even beginning.

In a sense, the Federal Reserve adopted a similar strategy following October 19, one aimed at shrinking irrational reactions in the financial system to an irreducible minimum. Early on Tuesday morning, October 20th, we issued a statement indicating that the Federal Reserve stood ready to provide liquidity to the economy and financial markets. In support of that policy, we maintained a highly visible presence through open

market operations, arranging System repurchase agreements each day from October 19th to the 30th. These were substantial in amount and were frequently arranged at an earlier time than usual, underscoring our intent to keep markets liquid.

By demonstrating openly our determination to meet liquidity demands, we could, in practice, reduce those demands to the extent they arose from exaggerated fears. Through its actions, the central bank can help to assure market participants that systemic concerns are being addressed and the risk contained--that isolated problems will not be allowed to infect the entire financial system.

The Federal Reserve's activities seem to have contributed to a calming of the extreme concerns generated by the stock market collapse. Gradually, risk premiums for private borrowers subsided, suggesting that the flight to quality had abated. However, there remained fear-based demands for liquidity, generated temporarily in the course of the financial turmoil, and there was also understandable and reasonable demands for excess reserves at depository institutions, whose reserve management turned appropriately more cautious. In addition, demand deposits bulged following the stock market fall, probably in conjunction with the surge in financial transactions. The Federal Reserve supplied extra reserves to accommodate these needs.

By helping to reduce irrational liquidity demands, and accommodating the remainder, the Federal Reserve avoided a tightening in overall pressures on reserve positions and an increase in short-term interest rates. In fact, we went even further and eased policy moderately following the stock market collapse in light of the greater risk to continued economic expansion. The federal funds rate dropped from over 7-1/2 percent just before October 19th to around 6-3/4 prcent in the first half of November, and regular adjustment and seasonal borrowing at the discount window fell from around $500 million to under $300 million in November. Rather than the spikes in rates observed in panics earlier in our history, short-term rates actually declined after October 19, even on private instruments.

At the same time, I should add that it was very important that our actions not be perceived as merely flooding the markets with reserves. That would not have addressed the problem. We undertook open market operations in a measured and calibrated way. Haphazard or excessive reserve creation would have fostered a notion that the Federal Reserve was willing to tolerate a rise in inflation, which could itself have impared market confidence. We were cautious to attack the problem that existed, and not cause one that didn't.

In addition, the Federal Reserve took a number of other steps following the stock market crash focused on the functioning of the markets and the financial strength of important participants. These were designed to enable us to be in a position to

address the consequences of the crash on markets, especially if they threatened further disruption to the financial system, and assure the markets of our efforts to contain the damage. Our actions dealt with a number of actual and potential specific problems, but more generally were also a key aspect of our strategy to contain the effects of the market disruption by maintaining a high visibility that would calm markets and reduce irrational demands for liquidity.

We recognized that the safety and stability of the banking system is essential to the success of this strategy. History teaches us that stock market declines that do not adversely affect the banking system have a much less serious effect on the overall economy than ones that do.

For example, the stock market crashed in March 1907, but the Panic of 1907 was not initiated until the failure of the Knickerbocker Trust Company in October. The damage to the economy following the stock market crash in October 1929 was much magnified by the series of bank failures which occurred in 1930-33. Conversely, the stock market fell sharply in May and June of 1962; however, the banking system was not seriously affected, and the effect on the overall economy was limited.

Accordingly, during the recent events, the System placed examiners in major banking institutions and monitored bank developments carefully in a number of ways.

For example, the Federal Reserve Banks kept close track of currency shipments to banking institutions in order to identify potential emerging bank runs. These shipments did increase after October 19, but seemed to involve banks that were taking precaution against runs that never occurred. In addition, there was a generalized increase in the demand for precautionary balances in currency by the public, not associated with runs on banks, that was also satisfied.

We reviewed the potential impact of stock market activity on pending bank holding company mergers and acquisitions. We monitoried the announced or unannounced intention of bank holding companies to buy back their stock. When discussing these possible actions with holding companies, we took the position that such purchases would be inappropriate other than on a limited basis to restore order in the market for their stock.

We paid particular attention to the credit relationships between banks and securities dealers. We assessed the banking industry's credit exposure to securities firms through loans, loan commitments, and letters of credit. We were in contact with both banks and securities firms regarding the liquidity and funding of brokers and dealers. We recognized that banks needed to exercise caution in their credit judgments to protect their financial stability. At the same time, banks have always been relied upon as important sources of credit in financial markets, especially when those markets are troubled and normal access may have been impaired. In our conversations with

banks, we stressed the importance of ensuring adequate liquidity to meet legitimate customer funding needs, even if they were unusually large, while recognizing explicitly the responsibility of market participants to make their own independent credit judgments.

In the event, banks did make a large volume of securities loans following the stock price decline. They apparently reviewed their credit exposure carefully, in some cases asking for additional collateral. However, our information suggests that there were only a few instances in which credit was withdrawn or requests for new credit were refused, and these involved relatively minor amounts. The generally good performance of this key lending function may be attributable, at least in part, to the knowledge that the Federal Reserve was making reserves freely available, so that banks would not be facing escalating funding costs.

The Federal Reserve also took particular interest in the government securities market. We have long had a special involvement in this market through our open market operations and as fiscal agent for the Treasury.

In the wake of the stock market decline, we stepped up our daily monitoring of primary government securities dealers and inter-dealer government securities brokers. We held discussions with regulators and other market practitioners regarding particular situations where firms were having difficulty meeting capital requirements. Officials of the Federal Reserve Bank of

New York met with representatives of government securities dealers and with inter-dealer government securities brokers with regard to concerns about counterparty risk, especially in when-issued trading associated with the Treasury's November refunding.

One problem that arose resulted from a reluctance of some holders of government securities to lend them as freely as they typically do. As a consequence, the incidence of failures to deliver particular government securities rose, potentially disrupting trading and liquidity in this key market. In response, the Federal Reserve temporarily liberalized the rules governing lending of securities from its portfolio. For a time we lifted per dealer and per issue limits on such lending, and set aside the rule against lending to facilitate short sales.

Beyond these efforts in the banking and government securities areas, the Federal Reserve was in frequent contact with market participants and officials at the Treasury and at other regulatory agencies regarding the functioning of other markets as well. The efforts proved essential to gather information, identify developing problems, and coordinate responses with other authorities.

Many of the contacts occurred through the Federal Reserve Banks of New York and Chicago, which have special knowledge and understanding of nearby markets and contacts with key officials. Through them and at the Board of Governors, we were in touch with officials at the stock, options, and futures exchanges, as well as with the Securities and Exchange Commission

and the Commodity Futures Trading Commission, regarding the liquidity of the markets, the functioning of market makers, operational problems, and settlement issues. In addition, we discussed the possible effect of sharp swings in markets on participants' financial conditions, to obtain advance warning of any problems that might be developing. To facilitate timely margin collections in futures markets, the Federal Reserve extended the hours of operation of its funds transfer system on October 19 and 20.

Furthermore, we closely monitored the international ramifications of the stock market crash, and the effect of developments in foreign markets on U.S. market participants. We communicated with officials of foreign central banks with regard to general market conditions, and with various market participants abroad regarding the effects of the stock market developments in specific markets.

In summary, the Federal Reserve acted in response to the stock market crash to reduce irrational fear-based demands for liquidity, to meet remaining unusual liquidity demands and to monitor developments in the government securities and equities markets and in the banking system. Our reactions to provide liqudity apparently prevented the sharp interest rate spikes observed in earlier crisis periods. Interest rate spreads have come back more into line, and market functioning appears to have returned toward more normal conditions. Although it appears that the acute crisis period has passed, markets remain quite sensitive, and could react strongly to developments that seemed to portend more market instability.

Stock Market Functioning at the Break

Regarding the matter of the overall functioning of our markets for equities and derivative instruments during the October turbulence, we now have the benefit of several major studies. More studies will be forthcoming. Clearly, the findings and the recommendations of these studies deserve careful consideration. Senator Brady and the other members of the Presidential task force, along with their staff, have done a remarkable job of assembling information and preparing their report on the October plunge in so short a span of time. The nation owes them a debt of gratitude for their efforts. We find their analysis of the causes of the stock break particularly instructive and subscribe to its general lines. We differ in part on some of their recommendations for reform. The Brady report, along with those of the CFTC, the GAO, and various private organizations, are adding much to our understanding of these events and the vulnerabilities of our securities markets to rapidly changing developments.

It hardly needs to be said that we are dealing with an extremely complex set of issues involving the factors that influence price movements in securities markets and the capability of our financial institutions to withstand extreme shocks. Not only do the studies emerging on this matter reinforce the point that there are close relationships among the various domestic securities markets and between these markets and their derivative counterparts but also the extent to which our financial marketplace has become intertwined with those abroad.

In addressing the issues before us, we must keep these dependencies in mind. We must also recognize that the financial system is in the process of evolution and that much of the change since mid-October has been in reaction to weaknesses displayed at that time. Some of these adaptations--such as a reduction in the use of portfolio insurance strategies--are taking forms which limit pressures that would be placed on the system in the event that circumstances similar to those of mid-October were to recur. Others are adding to the system's capacity to bear large shocks.

A central question is the cause of the market collapse and its suddenness. Only if we understand why it happened can we gain insights into how the structure of markets for equities and their derivatives can be improved. Not only was the stock price break very large but it was compressed into a very short span of time. We can point to a number of price declines in our history of a magnitude similar to last October but none have been as rapid. Also, the plunge was an international phenomenon. The drop was of fairly uniform severity across the major equity markets, affecting those with well-developed and less-developed derivative markets similarly.

Prior to the drop, the market had run up to very high levels. The bull market from 1982 onward was nurtured by a favorable economic setting for businesses, which investors came increasingly to view as likely to be sustained. In particular, inflation expectations were greatly reduced over this period, even as the economic expansion continued. However, stock prices finally reached levels which stretched to incredulity expectations of rising real earnings and falling discount factors. Something had to snap. If it didn't happen in October, it would have happened soon thereafter. The immediate cause of the break was incidental. The market plunge was an accident waiting to happen. Measures of real rates of return on equity investments indicated that such returns were at historically low levels last summer--a situation that in the past has been restored to more normal levels either by a subsequent sharp increase in earnings or a pronounced drop in share prices. In the event, we got the latter.

Probably contributing to high share prices were efforts by investors previous to October to extend their cash equity positions on the thought that the availability of liquid markets for derivative instruments would enable them to promptly trim their exposure and limit losses should they fear a turn down in prices. Many users of portfolio insurance strategies, especially those aggressive formal programs that were model driven and executed by computers, believed that they could limit their losses in a declining market, and hence were willing to be more than usually exposed in cash equity markets. However, the experience of last October vividly illustrates that timely

execution cannot be assured, especially under those conditions when it matters the most--when the markets are under heavy selling pressure. In essence, there was an illusion of liquidity that likely encouraged larger equity positions on the part of many investors. Of course, while an individual investor can in principle reduce exposure to price declines, the system as a whole with rare exceptions cannot.[1] Thus, strategies by so many investors to shed risk associated with a large decline in price were vulnerable in ways that had not been fully contemplated. The nearly simultaneous efforts of so many investors to contain losses pushed the system beyond its limits, exacerbating problems of execution and leading to portfolio losses that had not been envisioned when these strategies were adopted. The dramatic experience of October has, however, introduced more realism into such risk-shedding investment strategies, and in the process has defused some of the potential pressures on the system in the future. The mere fact of sharply lower prices has significantly reduced the risk of a replication of October 19.

Modern technology coupled with the greater presence of sophisticated institutional investors undoubtedly contributed to the suddenness of the October drop. Through modern telecommunications and information processing, investors can follow events as they unfold and react very promptly. What formerly took hours or days now can be done in seconds or minutes. Moreover, institutional investors have taken on a major role in the market for equities and derivative products--accounting for about two-thirds of trading volume--and these sophisticated investors are capable of reacting almost instantaneously to information as it becomes available; these investors also were heavy users of portfolio insurance programs that key off movements in market prices and reinforce buying or selling pressures.

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[1] To the degree that derivative instruments facilitate a better redistribution of price risk to those most willing and able to bear it, they can add to the appeal of cash equity investments to investors, encouraging them to hold larger permanent equity positions.

Modern technology along with major institutional presence in the market implies that an enormous volume of buy and sell orders can be sent to the markets at any moment, leading to very sudden pressures on prices. Furthermore, sharp downward price moves by themselves, such as those occurring last October, can act to heighten uncertainty in the markets and efforts to disengage, thereby compounding selling pressures. Under these circumstances, many potential buyers become reluctant to enter the market as the sharp price move, out the range of normal experience, leads to doubts about underlying values. In other words, a rapid decline in prices can act to raise the uncertainty premium in share returns adding, at least for a while, to downward price momentum and pressures on execution capacity. In earlier periods of large market declines, such as the Panic of 1907, news of the initial drop reached investors more slowly, for many, the next day. As a consequence, price declines were spread over a longer period of time and some of the trauma caused by a

sudden price break and the corresponding pressures on system capacity was thus avoided.

On top of these factors, system capacity became an influence on investor behavior. As investors came to recognize that the capacity of the system to execute trades was faltering, they sought to get out while they could. In other words, the realization by investors that the system cannot simultaneously accommodate all the efforts underway to reduce long positions in stocks or their derivative instruments prompts still others to attempt to get out, too. This situation is not at all unlike the conditions associated with a classic bank run once it becomes apparent to depositors that the bank's liquidity will be exhausted. The problem is compounded. The confusion and uncertainty about execution last October likely contributed to uncertainty premiums in share returns and thus to additional downward pressures on prices.

The emerging incoherence between the prices of stocks, stock index futures and options last October also contributed to uncertainty premiums and the downward pressure on prices. There is, of course, only one valuation process in these markets, that being the underlying value of the primary claims to corporate ownership. Index futures and options are claims on the primary claims and can have value only to the extent the underlying stocks have value. In fact, index futures and options merely gross up the demand and supply for equity-related products.

Every such contract has equal outstanding long and short positions, the net of which is, of necessity, a wash. Stocks, in contrast, reflect a net long position representing the total value of the combined equity and derivative products. In normal circumstances, when markets are functioning efficiently, arbitrage keeps the prices of these so-called derivative instruments in line with equities. But under the strains of last October, the individual markets for these instruments were fragmented, generating considerable price disparities. These disparities were able to persist for extended periods of time--adding to confusion and doubt--owing to a breakdown of the arbitrage process associated with the withdrawal process and execution problems.

Other factors added to strains on the markets last October. The lack of coordination of margin collection and payment crimped the liquidity of some market makers and their ability to maintain positions. Also, rumors and discussion of exchange closings and possibly insolvent clearing houses added to confusion in the markets and evidently encouraged some investors to liquidate portfolios before the markets shut down, further adding to strains on the system. In short, the initial rapidity of the price correction to an overvalued market, and a faltering execution capacity, sharply raised risk or uncertainty premiums, which contributed to historic declines in prices.

While much of the attention given to the performance of the equity and derivative markets last October has been on the

strains and weaknesses displayed, we must nonetheless not lose sight of the fact that we came through the crisis remarkably well, given what happened. No major brokerage firms failed, unprecedented margin calls by the futures clearing houses were met by their members, and stock prices reached a new trading range shortly after the plunge.

Structural and Regulatory Reforms

Turning to recommendations for structural reform, I particularly appreciate the opportunity to appear after Senator Brady. The Brady task force observes, as do others, that the weight of the evidence clearly indicates that the markets for securities and their derivative products are very closely interrelated and can and should be viewed as one market. They conclude that these circumstances require a common regulatory approach.

Recognizing that we are dealing fundamentally with a single market system is basic to addressing the structural and regulatory issues before us. We must appreciate that there is a single valuation process affecting stocks, index futures and options, and arbitrage across these markets in the normal course of events acts to keep the prices of these various instruments in alignment. Thus, we must not jump to the conclusion that movements in futures prices by themselves cause movements in the cash market just because they frequently precede them. We must be careful to avoid confusing symptoms with causes. When information affecting the value of equities becomes available, portfolio adjustments naturally occur first in those markets where the costs of making adjustments are lowest, which commonly has been in the futures markets. Arbitrage, including index arbitrage, acts to ensure that values in the cash market and elsewhere reflect the new information.

We must also recognize that some of the factors contributing to the October break cannot realistically be corrected by public policy. In part the sharpness of the October decline reflected modern telecommunications and information processing systems. But this technology also tends to enhance the efficiency of our markets and is beneficial to many other aspects of our welfare, and nevertheless, is here to stay. We must learn to adapt to this development as we have to so many others that have advanced our society. Similarly, we do not want to lose sight of the important role that professional institutional investors play in managing our retirement programs and the assets of nonprofit institutions, though their very sophistication and rapid response accelerated price moves in October. It also is important to realize that the so-called portfolio insurance programs that institutions have used are strategies and not products. These strategies frequently involve active use of derivative instruments but they would exist, though probably on a smaller scale, even without the availability of such products. Moreover, the experience of last October demonstrated to these investors that aggressive strategies aimed at eking out a little more yield are inherently much more risky than had been thought, especially in

those circumstances for which protection is most sought. Thus, the pressures that they would place on the system in the event of a future market contraction would be much diminished.

It is clear from the Brady report and from other studies that the capacity of the infrastructure of our financial system to absorb the extraordinary demands placed on it last October was insufficient. We must be aware that demands on the system could again exceed execution capability and that remedies may well be needed that expand capacity or that establish an orderly adjustment process once capacity limits have been reached.

Execution capacity expansion which rarely comes into play may imply a misuse of resources. As a consequence, the Brady task force recommendation for circuit breakers has some appeal. We now have a better idea of the consequences of relying on a disorderly process for dealing with massive volume and demands on market-maker capital in the context of volatile price behavior. Relying on the disorderly process of last October discourages buyers from entering as well as compounds investor uncertainty. The Brady report suggests circuit breakers in the form of price limits and coordinated trading halts as worthy of consideration. In a sense, this could be viewed as a way of slowing things down when market conditions become hectic and threaten to get out of control, thereby replicating conditions of the past. The use of price limits, provided that they are known in advance and sufficiently wide to permit trading in all but the most extreme circumstances, could prove to be a constructive measure for prompting a pause in trading, especially if there is unusual uncertainty on the part of lenders about the financial position of various market makers and brokers and uncertainties on the part of such borrowers about access to credit. They could also provide more time for policymakers to respond, if the conditions giving rise to the trading halt were deemed to be an emergency.

On the other hand, large price moves may lead to fears that the limits will be reached and that portfolio adjustments will not then be possible, putting more pressure on the system and assuring that the limits are hit. The recent proposal of the New York Stock Exchange to place temporary price limits on individual stocks could prove helpful in assessing the viability of price limits. Ad hoc methods for closing markets should best be avoided, as reliance on such methods is likely to encourage rumors of closings and add to market confusion. Also, a system that leads to market closings should be one that is coordinated among the markets, perhaps internationally; if not, trading likely would shift to those markets remaining open, potentially pushing them beyond their capacity constraints. Price limits and other circuit breakers must be viewed as being inherently destabilizing, but they may be the least bad of all the solutions. When orders exceed execution capacity, the system will break down. The only question is whether it is better for it to take

the form of a controlled disruption or leave the solution to a haphazard set of forces.

On the matter of regulatory structure, the Board in 1985 reviewed the appropriate form of margin regulation and suggested that margins on stocks and derivative instruments be set by self-regulatory organizations subject to federal oversight. It was thought that SROs were in the best position to determine the appropriate level of margin and had the incentive to do so to protect the integrity of their markets. It also was thought that federal oversight would be appropriate to assure coordination of margin setting across cash, futures, and options markets, and a direct federal role might be needed in emergency situations. The CFTC and SEC were viewed as playing an important role in federal oversight, given their knowledge and expertise in the markets that they regulate. The Board expressed its willingness to be a part of such a system.

We have reviewed the matter of federal oversight again and believe that such a concept continues to be appropriate. We appreciate the confidence that the Brady task force has implicitly placed in the Federal Reserve and also its reasons for recommending that a single agency have full intermarket oversight authority. However, we seriously question this recommendation. To be effective, an oversight authority must have considerable expertise in the markets subject to regulation, something that the CFTC and SEC have developed over some time. Moreover, were the Federal Reserve to be given a dominant role in securities market regulation, there could be a presumption by many that the federal safety net applicable to depository institutions was being extended to these markets and the Federal Reserve stood ready to jump in whenever a securities firm or clearing corporation was in difficulty. Coherence of federal oversight over the market for equity instruments could be achieved through merging the relevant portions of the CFTC with the SEC or by a joint oversight authority including the SEC, CFTC and perhaps the Federal Reserve or the Treasury.

We continue to view the achievement of consistent margins across the various instruments as being appropriate and that a federal oversight authority would be well positioned to accomplish this. The proper level of margin, though, is a very complicated issue and must be addressed carefully. There are fundamental differences in the price behavior of individual stocks, stock indexes, options, and futures that are likely to call for different levels of margin if our primary objective is to preserve the integrity of these markets while promoting liquidity. We must recognize that setting margin too high on an equity instrument would discourage the use of such an instrument and reduce its liquidity, indirectly affecting the markets for the other instruments as well.

On the related matter of clearing mechanisms, we concur with the spirit of the Brady task force that improvements in the clearing system are needed, based on a more unified approach. The evidence for mid-October shows that lack of synchronization

of margin collection and payment across the markets led to cases in which brokers or market makers were in a position of having to pay out margin in one market before being able to collect from another; this situation tended to squeeze liquidity and contributed to the overall problem. The need for better coordination of margin calls and collection and payment seems clear if the system is to be better able to withstand the kinds of strains that were placed on it last October. Whether a single clearing organization servicing all of the exchanges or tighter coordination of the clearing process among the existing exchanges is required remains an open question at this point. Another approach would be for a new intermarket clearing corporation to be established to handle the accounts of brokers, market makers and investors with intermarket positions. In any event, the relation between margin and clearing suggests a role for federal oversight in the intermarket clearing process.

Finally, the Brady task force proposes that detailed trading information be collected on a regular basis for purposes of monitoring market developments and identifying market abuses. The information to be collected would include, in addition to the trade, the time of the trade and the ultimate customer. While recognizing the potential value of such information, my colleagues on the Board and I oppose such data collection, except on a voluntary basis. The right to privacy is important for a free society and we believe that the case for collecting such information must be a compelling one, which this one does not seem to be. Also, such an action by the United States alone could well reduce the attractiveness of our securities markets to foreign investors, at a time when we are heavily dependent on foreign capital for financing our external deficit.

In sum, the Brady proposals and those formulated by others represent an important basis for public discussion. Reactions to these and other proposals by a wide cross section of the public will prove helpful in clarifying methods for strengthening our securities markets.

The CHAIRMAN. Thank you, Mr. Chairman, for an excellent statement.

The Brady task force, of course, Mr. Chairman, has made a number of specific legislative recommendations to Congress and this committee.

I questioned Senator Brady on this, this morning. I asked him about the timing of this kind of action. We obviously don't want to act too early. On the other hand, we don't want to go to sleep and take too long.

I agree, the Congress needs to act, and following these hearings, I shall consult members of the committee on where and how far they would like to go.

In the meantime, it would be useful if the committee were to receive a specific legislative recommendation of the Federal Reserve Board, if any, on the matters stemming from the stock market crash of last October. You've made some very useful suggestions here, but I think it would be more helpful, if you could give us a more detailed and specific list of what we should do and shouldn't do, and I would hope you could submit that by March 4.

Tomorrow, I plan to make a similar request of the SEC and the CFTC.

While the committee would be pleased if these three agencies could agree upon a common set of recommendations, if this is not possible, we still would want to have your separate recommendations.

Further, since all three agencies are independent regulatory agencies, we would want to receive your recommendations directly without being altered by the executive branch.

Would you comply with that request?

Chairman GREENSPAN. Yes, certainly, Mr. Chairman. We would, of course, want to see and examine in detail the forthcoming SEC evaluation, which is rather elaborate and could conceivably give us insight above that which we already have, but we will comply by March 4.

The CHAIRMAN. It's a good thing we're giving you some time. Here's a copy of it. [Laughter.]

This would add to the President's hernia problem, if he had to come up here and lift it up. It's a heavy report. [Laughter.]

We want very much to get your specific recommendations, especially with these other reports in mind.

Mr. Chairman, the CFTC report released today echoes the Brady Commission's recommendations: Better information on stock market trading should be collected to bring stock market information up to par with that already collected on the futures market.

In your testimony, you propose such an upgrading of information collection, as I understand it.

You suggest that collecting this information would make our markets less attractive to foreigners.

It is hard for me to understand the reason for that, why the derivative markets seem unconcerned at scaring away foreign investors. After all, they collect the data. They're not interested in chasing business away.

Chairman GREENSPAN. Mr. Chairman, what we're concerned about is the publication of information which would be detrimental to the use of markets. Such information is actually readily available, it just hasn't been put in collectible form. If such information were made available to the various regulatory agencies without public disclosure and exempt from the Freedom of Information Act, I believe we would withdraw any objections we have.

Our concern is the issue of privacy in publication.

COORDINATION BY FEDERAL RESERVE

The CHAIRMAN. The Brady Commission report recommends that the Federal Reserve be placed in charge of the oversight and coordination of market activities. You disagree with that recommendation. You suggested here that there be a kind of a, a group of two or three or four agencies that could act together. It seems to me that's always difficult, because that's less decisive, particularly in such a period as we've gone through. You're intimately involved in the funds transferring clearing process and setting margins in two or three of the relevant marketplaces.

Why shouldn't the Federal Reserve be placed in charge of such coordination?

Chairman GREENSPAN. Well, I think our major concern, Mr. Chairman, rests with the issue of the presumption that if we are in general oversight of the total securities market, including clearinghouses and the like, that we stand ready to offer funds, should any problems arise.

We are concerned that an attitude—the market's view—which somehow presumes that we would stand ready with the discount window open, would induce the type of activities that would increase risk. We think, at the moment, that the means by which the Federal Reserve oversees the financial system and makes liquidity available is adequate to solve the problems that would be envisioned. We would be concerned that we might spread an implied safety net to too large a segment of the financial system.

If that were perceived to be available, then without getting into the technical economics of our concern, the real rate of interest would begin to rise, which happens if you have too much guaranteeing in the system.

That, I think, would be detrimental to our economy.

The CHAIRMAN. You have a de facto situation. You, and of course, the Federal Reserve Board, you have that power to make liquidity available. You alone have that power.

Couldn't the expertise that you claim you not have, indeed, be developed?

Chairman GREENSPAN. Yes, Mr. Chairman. We are not, at the Federal Reserve Board, saying that if the Congress requests that we do something we will refuse. I am merely adding our views as to what, in effect, we think is appropriate to this dialog.

Obviously, there are advantages. We are obviously aware, perhaps more so than most of the disadvantages, of centralizing that much financial power in one organization. That does give us some concern.

The CHAIRMAN. Thank you. Senator Garn.

Senator **Garn**. Thank you for the courtesy, Mr. Chairman. But even though I arrived at 2:31, I think both Senator Hecht and Senator Gramm were here before me.

The **Chairman**. I just felt that the "Big Cheese" ought to go first! [Laughter.]

Senator Hecht, I guess you're up.

Senator **Hecht**. Thank you, Mr. Chairman. Thank you, Senator Garn.

First of all, Mr. Chairman, I would like to congratulate you on the manner in which you handled yourself on that day in October. I think your coolness and professional manner, under fire, probably was the most important single element that prevented a real meltdown.

Chairman **Greenspan**. Thank you very much.

Senator **Hecht**. I think we all owe you a deep debt of gratitude, and I am very impressed with the way you handled everything.

I think investors all over the world are very, very impressed with you.

On page 13 of your testimony, I just want to read one little paragraph and ask a question on that.

> However, stock prices finally reached levels which stretched to in—high expectations of rising real earnings and falling discount factors. Something had to snap. If it didn't happen in October, it would have happened soon thereafter. The immediate cause of the break was incidental. The market plunge was an accident waiting to happen.

Now let me ask you this. Just at that same time, as has been brought up by other Senators and myself, we were in a tight fix in Congress. Our spending seemed to be going out of control. We were trying to get a prudent budget. That was out of the question. It looked like interest rates were going higher. A majority of people in Congress and the people running for President wanted higher taxes. They were all pushing a restrictive trade bill. Antibusiness legislation was pending, plant closings, minimum wage, mandated health benefits, double breasting, antisecurity trading legislation, all came about in the same week timeframe.

In addition, the President, it seemed like, had lost control, and Judge Bork was not nominated to the Supreme Court.

Do you feel that all of this antibusiness legislation and the feeling that perhaps the Reagan era was going backward contributed to the stock market decline?

Chairman **Greenspan**. I could take that list and reproduce it in a period, say, when the stock market was sharply lower—say, 1982, 1983—and the impact on the Dow Jones Industrial Average would have been incidental.

What I'm saying is, anything will knock the market down once you get levels up to historic peaks where, in effect, you begin to have a view of the future which is no longer credibly implicit in the stock price level. It has got to come down. Any series of events which exists at the time when the stock market breaks is given the credit or blame for that particular break.

What I'm arguing is that that same set of economic circumstances, had they existed when the Dow Jones Industrial Average was at 700 or 800 and not at 2700, would have no noticeable effect.

As a consequence, I think it's important not to focus on a specific event, as though that would solve the market problem. You wouldn't, because had you improved or eliminated all of the lists, Senator, that you discussed, 3 weeks later or 1 month later or 2 months later, a new list, just as impressive, would have come up and been the cause of the decline.

WHAT CAN CONGRESS DO?

Senator **Hecht**. The next question, the key question based on these assumptions, is there anything we, in Congress, could have done then or can do now, in your opinion, as far as legislation to prevent another collapse?

Chairman **Greenspan**. I think that's basically the question which the Chairman has asked us. We will respond to that with specific legislation; however, I think what is important is, once stock prices rise to inordinately high levels, they will come down, and I've said—I will repeat what I said in my opening remarks—part of the problem, I think, occurred because it was essentially an irrational view of liquidity availability, and that enabled individual investors, sophisticated and otherwise, to take on much larger stock positions at much higher prices than they would otherwise have done. In that sense, the elimination, or I should say the very sharp retraction in portfolio insurance, so to speak, which is now under way, probably eliminates one of those key factors.

We, however, in our recommendations for legislation, will endeavor to focus on precisely that question, Senator, and, hopefully, come up with some issues which will be helpful.

I should point out, however, that we have always had stock market booms and stock market breaks. They occur for reasons outside the scope of the issues which are in front of us today, and I cannot say to you that we have found the means that will somehow eliminate either the business cycle or the cycle fluctuation in stock prices.

Senator **Hecht**. Thank you very much. My time has expired.

Again, my congratulations to you.

The **Chairman**. Senator Riegle.

Senator **Riegle**. Thank you, Mr. Chairman.

We are pleased to have you, Chairman Greenspan. And I was struck several times by the fact that you and SEC Chairman David Ruder arrived in your new jobs just before they got really very interesting, as today's hearing helps illustrate.

But I want to join with others to say that I, too, appreciate your steady hand during those difficult times and, in fact, know that shortly after taking over you asked that some contingency plans be drawn up at the Fed to deal with, and I quote, this comes from the General Accounting Office report on the crash, page 93, that you asked the Fed to come up with strategies or some reactions to be there in the light of "potential financial catastrophes such as a stock market crash.

That was obviously an act of foresight on your part.

CONTINGENCY PLANS FOR FINANCIAL CASTASTROPHES

What can you tell us about the nature of these plans which you developed? Were these used, in fact, when the market experienced these difficulties on October 19 and 20?

Chairman GREENSPAN. What we did, Senator, was to set up a series of task forces to think through what it is we knew about the nature of the markets and what type of response would occur. We obviously knew that any particular financial crisis would have its own characteristics and have to be addressed in a very concrete way.

I think that you reviewed a number of the issues, many of which did surface, actually, in our actions subsequent to October 19, and many of them are, in fact, outlined in my detailed testimony, which I must say, Mr. Chairman, I hope can be reproduced.

The CHAIRMAN. Without objection, it will be printed in full.

Senator RIEGLE. Let me ask you this. The press has reported that some commercial banks were unwilling to lend their securities customers the money they needed on October 20, in particular. The Federal Reserve has said that the presidents of these two Federal Reserve Banks made calls on bankers in their districts in this connection.

I would like you to be as forthcoming as you can be—and I think should be—here to tell us about credit problems that arose, where banks stepped away from those needs by their securities customers and the degree to which any part of the Federal Reserve System stepped in to lean on or to ask or press people to come forward with more credit.

Chairman GREENSPAN. Senator, I think first of all whenever you have a trauma of that nature, I think it would be incumbent upon any lender to be cautious. We certainly hope that everyone was.

Our concern was not in caution, but in irrational caution similar to the type of issue that I raised in the earlier part of my testimony with respect to separating rational and irrational responses in the demands for liquidity.

Our view was that the commercial banking system addressed these problems in a highly responsible way. There were occasions—very, very few—in which discussions were held. In no way were we attempting to prod banks to override their degree of caution, only to make certain if they had any concerns, that they were rational concerns.

Senator RIEGLE. What triggered that?

Chairman GREENSPAN. Basically, some statements or notions coming from other people that there were difficulties. So, we looked into them.

We found, however, that they were largely without merit. In the event, we would have had a very large increase in bank lending to securities firms—in effect above normal—which reflected the fact that these securities firms were having difficulty gaining access to credit from other sources, their usual sources. And in fact, the banks stepped in to supply it. This was unraveled only a few weeks later, which was suggestive of the fact that, if anything, the banks were stepping into the breach.

Senator **Riegle**. Just one more very short, quick question. That is, margin requirements are obviously a factor that controls the amount of credit that is available for people to go in and buy in financial markets. I am wondering what impact futures and options have on providing credit or leverage to the markets, as you see it. Has the Fed tried to quantify this? How good a handle do you have on the degree to which the amount of credit that comes off the multiplication of these margins is or is not a problem?

Chairman **Greenspan**. There are differences between stocks and futures, obviously. Futures are basically a performance bond which may or may not involve specific requirements. The margin on stocks, which is the value to be financed, obviously does reflect credit.

We are undergoing at the moment an evaluation process and, hopefully, we will have something useful to present to the committee, perhaps prior to the March 4 deadline which the chairman indicated.

Senator **Riegle**. I will be very interested in that.

My time is up, Mr. Chairman.

The **Chairman**. Senator Gramm?

Senator **Gramm**. Thank you, Mr. Chairman.

Dr. Greenspan, I would like to join the others in congratulating you for your timely and alert action in providing liquidity here. And I hope I am in the chorus that provides similar kudos for your work in providing stable money-supply growth that will sustain the recovery.

I wanted to begin by asking you a question. You read the Brady Commission report. If everything that Senator Brady proposed had been in effect in September of last year, do you believe that it would have prevented the precipitous decline in equity value? Do you believe the decline wouldn't have occurred, would have been smaller?

EFFECT OF BRADY COMMISSION PROPOSALS

Chairman **Greenspan**. I think we first have to ask the question whether the market would have gone up as much as it had if there had been a clear view of the real degree of liquidity in the system and whether or not portfolio insurance, which apparently became the rage in the last year or so of the market's rise, would have been perceived to be as potent as the people who got involved with it thought it would be.

My own impression is that the market would have gone up less in the early months of 1987 and as a consequence would have been less out of line and, therefore, there would have been less of a downside reaction.

My view is that with the types of circuit breakers that he is discussing and perhaps—and I say perhaps; we have not really given this the thought I think is required—if the margin evaluation had been in place and functioning, my judgment is that the extent of the stock market's decline on October 19 would have been significantly less.

Senator **Gramm**. You mention on the last page of your testimony, concern about intrusions into privacy affecting the attractiveness of our securities markets to foreign investors. How concerned do you think we ought to be in looking at the various proposals to make changes in the market mechanism about losing the foreign investors in the United States or potentially losing American investors to foreign markets that may spring up that may not have the same degree of regulation, redtape burden, et cetera?

Chairman **Greenspan**. Senator, I think we should be quite concerned, not because we have any concern or should about foreign investors per se, but we should have considerable concern about the viability and liquidity of our financial markets. We have the most extraordinary financial system in the world, and it is a major factor in contributing to the standard of living we enjoy here. My concern is that if we unduly regulate our system in a manner which induces the business to go abroad, I think we will find that we will do some damage to our economy overall. That spreads out far beyond the stock market. It is a very crucial advantage to this country to have a sophisticated liquid financial system that we have built up over the generations.

Senator **Gramm**. Mr. Chairman, that reminds me of the goose that laid the golden egg.

I have got time for one final question. Let me get you to review again your conception, if you were setting out the policy, of the interrelationship among the SEC, the Commodity Futures Trading Commission, and the Federal Reserve Bank as it relates to this intermarket clearing and attempts to provide stability in the functioning of two markets that clearly are interconnected.

Chairman **Greenspan**. The problem that we have, Senator, as has been indicated by many people of late, is that the timing of the clearances—this 5-day clearance on the stock exchange—is much shorter, obviously, in the various options and the futures markets. And the forms in which the systems function—that is, the clearinghouses in the futures market act as guarantors on both sides of the fence—is not the same as the form of clearing for stocks.

As a consequence of this, there is a need to have a general integration of the overall systems which would prevent the type of problems that occurred and created great difficulties during October 19 and 20 and immediately thereafter.

As a consequence of that, I think that the regulatory agencies which oversee these various aspects of the system should be more closely coordinated. And I would suspect, Senator, that even without legislation, that that is likely to occur rather quickly.

Senator **Gramm**. Thank you, Mr. Chairman.

The **Chairman**. Senator Dixon?

Senator **Dixon**. Mr. Chairman, I appreciate very much your valuable testimony this afternoon.

As you know, Senator Brady was before us this morning and suggested four priorities that he thought were significant matters for consideration by the committee. I think that by now we have a fixed opinion that you are clearly saying that you do not want the Fed to be the central agency for the collection of this information, data, and other things that were suggested by that testimony this morning. Is that a fair statement?

Chairman **Greenspan**. Yes, sir, we would prefer not.

Senator **Dixon**. In addition to that, looking at page 22 of your testimony, in talking about Federal oversight, you say:

> We seriously question this recommendation. To be effective, an oversight authority must have considerable expertise in the markets subject to regulation, something that the CFTC and the SEC have developed over some time.

Would it be fair to interpret that testimony to be, or could I come to the conclusion from that, that you consider those agencies competent and agencies that have the expertise to deal with these problems right now?

Chairman **Greenspan**. Yes, sir.

Senator **Dixon**. You talked as well about margin. I quote you on page 23:

> The proper level of margins is a very complicated issue and must be addressed carefully. There are fundamental differences in the price behavior of individual stocks, stock indexes, and futures that are likely to call for differing levels of margin. If our primary objective is to protect the integrity of these markets while promoting liquidity, we must recognize that setting margins too high on an equity instrument would discourage the use of such instrument and reduce its liquidity, indirectly affecting the markets or the other instruments as well.

Of course, you stand behind that statement. I suggested to Senator Brady this morning that contrary to the public impression left by the media, I think, that there is a 50-percent margin in the stock market, the fact is that professional traders have a 25-percent margin. There are some who have suggested to me it could be even lower. And in fact, there are 5 business days or 7 calendar days to clear up an account, while in the futures industry the account must be cleared up in 24 hours. In the one case you are buying stock, in the other case you are hedging against changes in the market position. And you see those as real distinctions, do you not?

Chairman **Greenspan**. Yes, sir.

Senator **Dixon**. Then, may I ask you in all fairness, Mr. Chairman, on the basis of other remarks I have seen in here—I am trying to find it, but I have underlined so many parts of your testimony. Oh, you talk about the circuit breakers and things of that character, and you suggest that these items may be viewed as being inherently destabilizing to the marketplace.

Is it not a fact, Mr. Chairman, that every one of these things that we are discussing here and the question of the merits in every one of these suggestions in the earlier testimony this morning and other things can be destabilizing factors in the marketplace and that we ought to proceed prudently, we ought to proceed prudently and cautiously in view of that fact?

Chairman **Greenspan**. Yes. Now, I said that the various forms of circuit breakers are, by their nature, destabilizing. The problem basically is a choice not between good and bad but between bad and worse. And our view basically is that the circuit breakers, while clearly part of the problem, are better than allowing the system to break apart at random by itself.

Senator **Dixon**. If I may, in all fairness, if I interpret fairly your testimony and your prepared text this afternoon as to all four priorities suggested in the Brady testimony this morning, you are saying evaluate these things; some you have said we won't do at the Fed; but others you have said we want to evaluate this, we want to be cautious in what we do.

Is that a fair interpretation of what you are saying here?

Chairman **Greenspan**. Yes. I think we are still in the process of evaluating this. We have not seen the SEC report, and judging from its size, it's going to take a while to digest that.

But I hope, Senator, that when we have digested it, we will come to a conclusion and present it as the chairman requested.

Senator **Dixon**. Would it be fair to suggest to you, Mr. Chairman, that 30 days is a rather hasty undertaking for a matter as volatile as this and one that could be ultimately as destabilizing as you suggested in view of the many things that we have addressed here that I have seen over the years that require considerable time to arrive at the solid conclusions one ought to arrive at ultimately?

Chairman **Greenspan**. I would say time is not the issue. It is how thoroughly the issues are resolved.

Senator **Dixon**. How correctly it is interpreted.

I thank you, Mr. Chairman.

The **Chairman**. Thank you, Senator Dixon.

Senator Garn?

Senator **Garn**. Thank you, Mr. Chairman.

Let me add to the praise from my colleagues, Chairman Greenspan, about your performance last October 19 and shortly thereafter. I think you did an outstanding job at the helm of the Fed throughout those events. You took swift but, in my opinion, balanced action to maintain the confidence in the financial system. It certainly can be described as trial by fire, your being so new in the position. But I think you performed very, very well under some very difficult circumstances—certainly justifying the confidence that this committee placed in you when we confirmed you last summer.

Chairman **Greenspan**. Thank you.

Senator **Garn**. I have just one question at this point. I have been through this many times. Any time we start talking about financial deregulation, the Proxmire-Garn bill, or any of the proposals that are before this committee, an event of this kind is always used as a reason that we should not expand any bank powers.

It seems that just at the wrong time there is always this massive excuse or reason for the opponents of any modernization of our financial system to come forth. And so they say, first of all, that obviously securities are inherently risky and certainly this is proof that banks should not be involved in securities at all. And second, that if they had been involved in securities, they would have loaned massive amounts of money to their securities affiliates to bail them out of this crisis.

Do you agree with those arguments?

Chairman **Greenspan**. No, sir. [Laughter.]

Senator **Garn**. I was certain he would say that, or I would not have asked the question. [Laughter.]

Senator **Dixon**. Smart trial lawyer.

Chairman **Greenspan**. I will go further if you would like. [Laughter.]

Senator **Garn**. Yes, I would like.

Chairman **Greenspan**. According to Proxmire-Garn bill, they can't do that.

Senator **Garn**. For those who don't know, Proxmire-Garn specifically prohibits any bank from loaning money to their affiliates.

Thank you, Mr. Chairman, unless you want to add more.

Chairman **Greenspan**. All I would say is that we at the Federal Reserve did review our support of the Proxmire-Garn bill subsequent to October 19 for precisely the reasons that you suggest, and concluded that there was no reason that we could point to that should in any way alter one's support for that legislation, and we continue to reaffirm our support.

Senator **Garn**. Thank you.

Thank you, Mr. Chairman.

The **Chairman**. Thank you.

Senator Graham?

Senator **Graham**. Thank you.

I would like to add my name to the list of those who have expressed their appreciation and commendation for your outstanding service during a very critical time, Mr. Chairman.

I would like first to follow up on the question that Senator Garn was pursuing. In your judgment, had the Proxmire-Garn bill passed 24 months ago and been implemented prior to October 1987, do you think that it would have made any difference either in the events prior to that day or on that day to have had commercial banks more directly involved in the securities business?

Chairman **Greenspan**. I think not, Senator. The events of October 19 and forward would have certainly not been affected by enactment of such legislation, nor do I think that the enactment itself would have significantly affected in any material way what occurred subsequently.

PRECAUTIONARY CONSIDERATIONS AS TO PROXMIRE-GARN

Senator **Graham**. Based on what happened in October or prior thereto, are there any precautionary or concurrent steps that you would recommend that should accompany the consideration of Proxmire-Garn?

I might add that I have recently been in London and talked with several of the regulators and the participants in their financial institutions. And I was struck with the fact that there seems to be a careful coordination of regulatory—recognizing the fact that their system is a different system than ours—activities and the expansion of authority for commercial banks.

I wonder if you have any suggestion from your examinations of this recent experience of any changes either in powers or capacities of the Federal Reserve, the SEC, or other regulatory agencies that should accompany the adoption of Proxmire-Garn?

Chairman **Greenspan**. Senator, my initial reaction is I can't think of any. But we will review that as part of the request of Chairman Proxmire to submit recommendations for legislation, and should that view change, we will try to advise you of that, whatever recommendations we make.

Senator **Graham**. Last question. There have been several suggestions of various studies to carry the analysis that has already taken place that is the focus of these hearings further. One of those is a study of the payment system. Another is a study on development and optimization of capital adequacy and reporting requirements applicable to holding companies regulated by the Federal Reserve Board and holding companies or securities firms regulated by the Securities and Exchange Commission.

What would be your position in terms of the appropriateness of such a study, particularly on the harmonizing capital adequacies and securities affiliate reporting requirements?

Chairman **Greenspan**. Well, I think we at the Federal Reserve and, I believe, the other agencies are continuously moving forward, trying to increase our insight into the issue of capital adequacy and other related issues.

I personally have been concerned about the levels of capital in our economy generally, not only in the financial system but beyond. And I do think that if there is one area where we should be particularly vigilant, it is to make certain that we are appropriately capitalized and that we do not overly leverage our system, not only with respect to financial problems but also with respect to nonfinancial as well.

Senator **Graham**. Thank you, Mr. Chairman.

The **Chairman**. Senator Bond?

Senator **Bond**. Mr. Greenspan, I certainly join with others in commending you on our handling of the very difficult challenge of October 19. I am, I believe, persuaded by your views on the preferability of a coordinated market oversight rather than providing additional powers to the Federal Reserve to be the intermarket regulator.

FALSE IMPRESSION OF FED

But I wonder, it occurred to me, with respect to your argument that the Federal Reserve regulation might give a false impression that the Fed stood behind some of these activities, that there was some kind of Federal protection for these activities if the Federal Reserve was involved.

Does Federal Reserve supervision over bank holding companies, for example, give some undue appearance of regulatory or official sponsorship to bank holding companies? It is an unrelated question, but the answer, I wonder if that is applicable.

Chairman **Greenspan**. I think that what the Federal Reserve does in that area is what the statutes state. In other words, we have certain obligations that the Congress has requested of us. That is precisely how we see our particular job.

We are concerned that there is a general view that if one gets into an unduly risky position, that the Federal Reserve is there to bail out the situation. We are not. What we are there for is to protect the total system in the event that we run into a financial crisis. That is basically the reason we took the particular actions we took on October 19.

But I think that we are concerned about this notion spreading, and let me just take a moment to perhaps explain this in some detail. It is really the same issue that is addressed in the question of Federal guarantees of liabilities of the private sector. It seems when you guarantee something, that you solve the problem, and if there were not a great deal of Federal guarantees outstanding, there is no presumed cost to the system overall.

If you overguarantee the system either directly or by perception, then as economists like to say, the demand for credit becomes highly inelastic. People will have a tremendous borrowing desire and they will leverage to the point which drives real interest rates up to levels which make economic growth very difficult to sustain.

It is precisely this issue which concerns us and underlies our concern about the extension of the Federal safety net which the Federal Reserve is involved with to areas beyond our particular scope.

Senator **Bond**. Turning back to the more direct comments that you made earlier, you talked about the illusion of liquidity that portfolio insurance fostered, or at least depended upon. You note that the experience has certainly made portfolio insurance and similar trading strategies less desirable. Is it your feeling at this point that the lesson of the marketplace is adequate? Do you feel that we perhaps ought to be investigating some kinds of limitations to deal with whatever the next generation of strategies to protect against loss may be?

Chairman **Greenspan**. Senator, unless my recollection fails me, I think that portfolio insurance has fallen by two-thirds since October. The markets are telling us that it didn't work. Therefore, it doesn't have a particular future.

But remember that portfolio insurance is not a product, it is a strategy, and as a consequence, it really is an extension of what used to be the stop-loss strategies of an earlier generation. Invariably, there will be new ones coming up. I don't know how one can legislate against them.

All I think that one must do is to consider a possibility and to recognize in potential future legislation or regulation what types of things might serve and, consequently, how they would be best addressed.

Senator **Bond**. I see my time is up. Thank you.

The **Chairman**. Senator Sanford?

Senator **Sanford**. Thank you for being here, and thank you for this testimony.

I was going to ask you what you would like to see the Federal Reserve do, but I understand the chairman has already asked that question. So, I will pass on to something else.

There were two or three people this morning alluding to the fact that no one pays attention to the market and the problems of the market while the volume is going up, but only when we have problems like a sharp downturn.

You will recall that in September we discussed the danger of the runaway market in terms of the options on futures. And I wonder basically if the warnings that Eliot Janeway was making about the market, that it was running away and was about to collapse, attributing that primarily to the fact that financial futures had taken over as the driving force in institutionalized markets and chiding your predecessor for not doing something about asserting a role and seeing that options and futures and equities at least had some similarity to the levels of margins.

As I recall, the Board had earlier studied that and decided to leave it to the CFTC and SEC, but that perhaps some thought was being given that maybe the Federal Reserve should give it more thought. I just would like to pursue that a little bit in light of your testimony.

A lot of us, along with Mr. Brady, have a great deal of confidence in the Federal Reserve Board. I suppose we think you can do anything. But what about now a firmer position? Should all three kinds of securities be generally—or at least should the margins be set by one agency?

Chairman **Greenspan**. I don't think they need to be set by one agency, Senator. I do think they need to be coordinated. It is our belief that if we basically use self-regulatory organizations from the different exchanges with a Federal oversight, I think we can be pretty well certain that we will get appropriately coordinated actions with respect to margins of stocks, futures, and options. I do not think that there is a necessity for a single organization.

In my judgment, I think we can get all the concerns that people have with a single unitary organization resolved. I think we could do that very readily with the coordinating committee in the context of getting the various regulatory groups together for a specific purpose.

I think that at least in the time I have been here, that has worked quite well. For example, I have a regulatory breakfast with the Chairman of the FDIC, the Comptroller of the Currency, and other people in the administration, and we periodically discuss and coordinate our positions.

Senator **Sanford**. I thank you very much. My time has run out. But I hope that when you answer the chairman's question, that part of that will be spelling out what you mean by Federal oversight.

Thank you so much.

The **Chairman**. Senator Chafee?

Senator **Chafee**. Thank you, Mr. Chairman.

Dr. Greenspan, I certainly am glad your hand was on the helm in October and appreciate what you did.

This morning, Senator Brady in his testimony said that we are still looking down the barrel of the gun and it's loaded. In other words, October 19 could occur again.

Is that your judgment likewise?

FUTURE INSTABILITIES IN FINANCIAL MARKETS

Chairman **Greenspan**. I don't think it could happen in the same way. I do think that one very important difference is that we have had an adjustment in stock prices, and everyone may say, you know, obviously you have to be less vulnerable from this level than we were at the levels at the top of the market. And the fact that portfolio insurance itself—which was, I think, a problem—is to a very large extent defused.

So, while I obviously am and have to be concerned about future instabilities in all the financial markets, I would say that a number of things have already happened in the marketplace which have significantly reduced the probability of a reoccurrence in the period immediately ahead.

Senator **Chafee**. But I don't think they have been inherent changes, have they? They have been changes that have come about because the market has come down.

I suppose if the market were down 1,000, that change would be much less also.

Chairman **Greenspan**. I am saying that. I would also say that the very sharp diminution in portfolio insurance is a factor which has been helpful.

Senator **Chafee**. On page 19 you say in reference to that the experience of last October demonstrated to these investors—that is, those using the portfolio insurance—that aggressive strategies aimed at eking out a little more yield are inherently more risky than thought.

But I think if there is one thing we ever learned about those in the market, they soon forget the lessons that took place yesterday or yesteryear.

The point I am trying to make—and see if you agree with me—is that, yes, things have changed but they have changed not basically, they have changed because of a searing experience that will be forgotten.

Chairman **Greenspan**. I agree with that, Senator. I am just merely stipulating that, as things stand as of today. But if you were asking me is such an event in our future capable of being ruled out, I would say of course not.

Senator **Chafee**. Now, on page 18 you say we came through the crisis remarkably well, you've got to remember that. Would you say the individual investor came through the crisis remarkably well? I don't know whether you have done any studies or anything. What is your judgment?

Chairman **Greenspan**. I don't know how anybody except somebody who was short came out well on that famous day. Referring to the specific problems of the small investor transactions, I think one has to argue that nobody came out well on that day and the market was under tremendous pressure. In that context, it did well, but I don't see how any market could have functioned efficiently in the context of the pressures that it was exposed to.

Senator **Chafee**. I am not clear that I totally understand your position on circuit breakers, one of Senator Brady's Commission's recommendations. You say they are inherently destabilizing, but I am not sure you are against them.

Chairman **Greenspan**. No, I am not.

The reason I am not is that it is not as though we are confronted with a choice of solutions and a nonsolution for good or bad.

What we are confronted with is a situation in which at some point in the future we are going to again be confronted with an aggregate of demand; that is, orders on the execution capacity of our securities markets, which will be such an excess that unless there is something to absorb it the total system will break down again.

What I am saying is that it is better or less worse—if I may coin a phrase—to have a destabilizing but not really dangerous type of circuit breaker in place as distinct from letting the random forces of excess demand work their way through an inadequate execution.

We have had circuit breakers in commodity markets. They have worked reasonably well.

They are destabilizing. There is no question about that in the sense that there is a tendency presumably as you get close to the limits, the price limit, that you will tend to get a much more rapid rate of movement in price when we move to the limit.

If we could do without them, we should. If we could find other solutions, we should.

I am in favor of circuit breakers, not because I like them, but basically because they do less damage than the alternatives.

Senator **Chafee**. I have a stern note that my time is expired.

Thank you. [Laughter.]

The **Chairman**. Senator Sarbanes.

Senator **Sarbanes**. Thank you very much, Mr. Chairman.

Mr. Greenspan, I want to return to pages 10 and 11 of your statement. Actually, it comes at the end of a recitation of a number of steps which the Federal Reserve took back in October to address the situation.

The first question I want to put is do you still have in place or are you pursuing any measures different from those that were in place prior to the developments of October 19?

Chairman **Greenspan**. I would say our degree of surveillance is still somewhat heightened, in the sense we are aware of the fact that the markets, while very significantly restored to more normal relationships, are in certain respects not quite back to normal.

Certain yield spreads, certain instruments suggest that there is still a degree of edginess and instability in the system, but we no longer have a special set of provisions with respect to the lending of Federal securities, which we ended after a certain point.

We no longer have our daily FOMC meetings which we had on the telephone to have continuous oversight into what was going on in the economy at the time. And we don't have the type and the level of heightened regulatory awareness—looking at everything in the detail that we were looking at—because we don't think that is necessary, and we are largely but not fully restored to normal with respect to the overall issue of oversight.

Senator **Sarbanes**. How much did the Fed put in to address the liquidity problem in the market?

Chairman **Greenspan**. Let's define what the appropriate terminology is.

What we specifically did was to try to make a judgment as to the amount of special demand for liquid funds, either in excess reserves or other aspects of the system that were the result of the fear-driven concerns that resulted from the collapse of the market.

Having done that, we then added somewhat to it and hence created what I would call an adjusted free reserve position, which was somewhat more generous than had existed previous to the stock market break.

We, as I have said in my testimony, created a degree of ease, which was more than would have been required solely for the purpose of meeting the liquidity demands that were engendered net as a consequence of the stock market break. We put in additional reserves because in our judgment the economy as a consequence of that shock was basically at risk, and as a consequence of that we chose to resort to a somewhat easier policy to adjust to that fact.

Senator **Sarbanes**. What was the order of magnitude of those two elements, the liquidity demands for the market and then the extra amount that you undertook to address, I take it, the broader concerns.

Chairman **Greenspan**. Senator, one way of looking at that is that the increase in nonborrowed reserves in the month of October went up at a 15-percent annual rate. That is a rough measure—at an annual rate, not 15 percent flat. That is a very large number and as a consequence of that we believe that in retrospect that turned out to be roughly what would be theoretically the desirable margin.

Senator **Sarbanes**. What does that involve?

Chairman **Greenspan**. Why don't I present that for the record because I don't have the actual weekly data in front of me. But I will present that for the record.

[Chairman Greenspan subsequently submitted the following information:]

There are several measures that can be used to gauge the Federal Reserve's reserve provision after the stock market decline of October 19. One is nonborrowed reserves—these are the reserves that are available to depository institutions without going into the discount window and are the most direct reflection of our open market operations. These reserves rose $970 million in the 2-week reserve maintenance period ending November 4, the first period following the crash. This accommodated an increase in reserves to back strength in demand deposits and NOW accounts, a rise in excess reserves banks wanted to hold, and reduced pressure for banks to obtain at the discount window. Another view of our operations can be had from looking at "net free reserves", which is the excess of reserves we supply over what depository institutions need to back deposits. In the November 4 statement period, these rose to $1,275 million from $440 million the previous two weeks, also indicating a more generous stance of reserve provision.

Both nonborrowed and free reserves dropped off in subsequent reserve periods. Nonborrowed reserves reversed their previous increase when the bulge in deposits and accompanying need for reserves ran off as market conditions calmed somewhat. However, free reserves remained somewhat above levels prior to October 19, reflecting accommodation of continued higher levels of demands for excess reserves and some easing of monetary policy to encourage progress toward more normal market functioning and to support the economy after the stock market collapse.

Senator **Dixon**. You said 15, didn't you, not 50?

Chairman **Greenspan**. Fifteen was the annual rate, the nonborrowed reserves.

Senator **Sarbanes**. My time is up. I just want to ask one very quick question.

On pages 22 and 23 of your statement, about the appropriate form of margin regulation, it says, "* * * the SRO's were in the best position to determine the appropriate level * * * and had the incentive to do so to protect the integrity of their markets."

Is there any incentive for them to regain a competitive advantage in a particular market, or does that work at cross-purposes in terms of setting the margin? Would it gain an advantage compared to some other market?

Chairman **Greenspan**. Senator, that is the reason we think that the Federal oversight should be there. In most instances, maybe the vast majority of instances, we think that the SRO's would function appropriately.

Senator **Sarbanes**. The 1985 conclusion was faulty in this regard, failing to appreciate that concern.

Chairman **Greenspan**. No. As best I remember what was involved then, it was the support for Federal oversight at that time.

Senator **Sarbanes**. And when you say "we" in the last paragraph on page 22, "We have reviewed the matter of Federal oversight * * *," who is the "we"?

Chairman **Greenspan**. "We" refers to the Federal Reserve Board.

Senator **Sarbanes**. So that was a decision discussed in the Board?

Chairman **Greenspan**. That is correct.

Senator **Sarbanes**. My time is up. Thank you, Mr. Chairman.

The **Chairman**. Senator Dodd.

Senator **Dodd**. Thank you, Mr. Chairman.

Welcome to the committee.

Let me ask a couple of questions. Some of these you may have touched on already. You might go into these issues in a bit more depth, if you would.

OVERSIGHT

On page 23 of your testimony, you state, and I quote you,

> Coherence of Federal oversight market for equity instruments could be achieved through merging the relevant portions of the CFTC with the SEC or by a joint oversight authority, including the SEC, the CFTC, and perhaps the Federal Reserve or the Treasury.

Of those two suggestions, which one do you favor. Wouldn't it really make more sense, instead of creating yet another superstructure with all of the problems associated with it, just to defer to the SEC on these matters? Why is that a bad idea?

Chairman **Greenspan**. We don't think it is a bad idea per se. I think it is a question of essentially which is the best idea amongst a number, all of which in my judgment would work.

I think there are problems, obviously, with all of them as well—structural problems. There are administrative problems, and it really gets down to a question of which would be the superior form.

We will come to a judgment at the request of Chairman Proxmire and submit a very specific proposal, but I wouldn't want to argue that one is superior and all others inferior. I think they all have the capability of accomplishing what we think needs to be accomplished, and it is merely an administrative problem which is the easiest way to go about it.

Senator **Dodd**. But you would include in that the possibility of SEC exclusive oversight on the these matters?

Chairman **Greenspan**. Yes, I think that is conceivable, and that would imply very simply that those areas of oversight which require regulation of the derivative products would also be with the SEC.

Senator **Dodd**. I missed Senator Gramm's particular line of questioning, but one of the points he raised quite often is that if we become too restrictive in our regulatory scheme, then we might drive investors to offshore markets, and that that is something we ought to be sensitive to.

I think that is a very good point. We have certainly seen movement to offshore markets from time to time. But at the same time we can not simply throw up our hands and declare that all is well.

I am wondering, about something that I think we have discussed before and that I think we may have talked about it in your confirmation hearings. With the globalization of markets we have seen that October 19 wasn't an isolated incident in which only our market suffered.

In fact, it was preordained a bit by what occurred the Friday before, and of course between October 19 and 20 we saw continued negative reactions around the globe, though not as severe in some cases as our own.

There was a globalization of October 19. The idea somehow that this was something that happened to our own market is untrue.

Now, how do you address this problem of globalization, while avoiding a regulatory scheme which is a least common denominator.

Is there serious consideration being given to trying to develop an international scheme which would make some sense, No. 1?

No. 2, do we get any information at all from other market regulators to the extent they exist; for instance, from London or from Asia? Is there any information sharing at all? If not, why not?

Chairman GREENSPAN. Well, Senator, I am not sufficiently familiar with the type of relations, for example, that the Chairman of the SEC has with his counterparts in other nations.

I think that judging from talking to various finance ministers and central bankers in recent months, I would say that the atmosphere for international cooperation of this sort is clearly there.

My impression basically is that having done as well as we did on commercial bank regulatory issues in our international discussions on risk-based capital—we were able to evolve much more of a coherence than I would have originally thought was feasible—I think it perhaps would be quite useful to delve into the securities markets in the same manner. My impression is that our different counterparts abroad would probably be quite interested in such discussions.

Senator DODD. To your knowledge, have we gotten beyond discussions on any of these issues?

Chairman GREENSPAN. I frankly don't know, Senator. I think that would be a very useful question to ask Mr. Ruder, who will be here, as I understand, tomorrow. He probably knows much more on this issue than I.

Senator DODD. I have also received my stern notice here that my time has expired.

I understand you said here earlier that deregulation would not have affected what happened on October 19.

You make the point on page 6 about the crisis of 1929 and the crisis of 1962, their the banking/securities relationship in your view had no effect on those two situations.

Chairman GREENSPAN. It is an interesting question about the 1929 period because, as you know, there has been a vast amount of discussion and legislation subsequently.

There were a number of things which were wrong with securities in 1929. I don't think that they were handled under the Securities

Exchange Act. I am not certain that what occurred relevant to the Glass-Steagall Act really was all that relevant nor a problem as we see it in retrospect.

So I would not want to say that the issue of the commercial banking/securities link in 1929 had no effect, but I am saying that I don't believe that the effects were left in place after the Securities and Exchange Act.

My judgment basically is that what it is that Glass-Steagall addressed was not really all that relevant.

Senator DODD. I have read similar theses. I am now the Chairman. [Laughter.]

What would you like to do? [Laughter.]

I have been asked to recess this, I think probably for 10 or 15 minutes, just so we have a chance to finish the voting and come back.

The committee will stand in recess until 4:15 p.m.

[Recess.]

The CHAIRMAN. Mr. Chairman, Senator Riegle is here. And I don't know whether Senator Sasser has completed his questioning or not.

I'd like to ask you about a New York Times article published on January 11 of this year. And I quote:

> The Fed's system for transferring sums between banks broke down on Tuesday—that's October 20—for about an hour.

ELECTRONIC NETWORK SYSTEM

My question is did that actually happen? If so, what steps have been taken to ensure that the electronic network system works without interruption in the future?

Chairman GREENSPAN. The total system didn't break down, Mr. Chairman. I think, as I recall, there were small shutdowns at the Federal Reserve Bank of Chicago. They were of minor dimensions and subsequent examination of the effects of them on the overall events of those days turned out to be nonexistent to negligible.

So, the story, as I understand it, implied that the total Fed wire went down. And it did not. As I understand it, it was just a temporary computer breakdown.

The CHAIRMAN. Were there any close calls?

Chairman GREENSPAN. Not then. We've had them on other days.

The CHAIRMAN. Do you feel that you have as far as the technology is concerned, do you feel you have adequate backup and it's about as good as it's going to get, or it could get in a situation where you have big sell-offs?

Chairman GREENSPAN. The answer is: Not quite. And the reason it's not quite is that we are dealing with fairly advanced technologies. And, indeed, the Fed wire system, the whole process, which is involved, for example, at the Federal Reserve Bank of New York, is a highly sophisticated, fairly advanced system which we are continuously monitoring.

Such a system is always subject to various software problems. And they do emerge. And there have been several occasions—not October 19 and 20, when we had difficulties with the system which broke down temporarily and came back.

We are, however, at the Fed looking at all sorts of backup possibilities. We've got a number of different studies ongoing on that exact question. And we will not be satisfied until we have essentially the best that can be done.

But I don't want to communicate to you that it is possible, in fact, to get a fully fail-safe system until we have completed what I would think would be the type of total system interaction which will require some additional facilities and some additional thought for what it is that we've got.

I think it's a remarkable system. I think it does what it's supposed to do. And it's downtime relative to comparable systems has been remarkably small.

The CHAIRMAN. Let me get back to the issue that is so critical and important as to what kind of overarching regulations we might have.

The options are, and I think you've indicated you feel strongly that we should not leave the system the way it is. We need to coordinate the system to be changed and improved.

In addition to the Fed taking over as the overarching regulator or the Treasury taking over in that position, as I understand it, you suggested there might be a coordinating committee with the CFTC and the SEC in it.

Now, you indicated that with two or three other organizations, it's not that much different than the Fed making a decision because you have to have seven Governors meet and agree.

But you take a vote and, rightly or wrongly, we hold you responsible, as you know. And you can't escape that. And that's a matter of comfort to the Congress and to the country, I think, that this is centered in one organization in whom we have great confidence and which has great resources and excellent leadership, particularly since you've been Chairman.

Now, the Fed has seven Governors. The CFTC, as I understand it, has five people who would act. The SEC has five Commissioners. Presumably, each agency would act as a unit, so you wouldn't just add up the votes and it would be a 2 to 1 decision if there was any controversy.

Under those circumstances, it would be difficult for us to fix responsibility on an agency the way we can now, or the way we could if we had you or the Treasury or some one agency in charge. You'd be in the same delightful position as I am in in the Senate.

If somebody blames the Senate, I can get away with saying, "Well, I'm different. It's the other dummies that did that."

You can do the same thing as a House Member. It's nice if you're up for elective office. But, as far as the constituency is concerned, it's not as good, it seems to me, as having one specific organization which is responsible overall.

How about that?

Chairman GREENSPAN. Senator, I think that you are raising the positive pluses that exist in the Brady proposal. I would certainly not argue that it's without merit.

I'm not saying that it's clearly inappropriate or wrong. We may disagree with it, but not because we don't recognize that there are clear benefits from having a single authority responsible to the Congress.

We think, however, that that particular structure, looking at the total regulatory issue of all financial institutions, is not the best one. And our view is that something which would have some tripartite or some other type of organization which would take it in the context of the total financial system regulation would be superior.

But we don't deny that there are advantages to having a single agency.

The CHAIRMAN. One of the advantages that occurs to me, as that Senator Riegle has graciously allowed me to proceed, one advantage is that (a) it's necessary to act fast often to be in a situation like Black Monday; (b) very often, it would seem to me it would be very desirable to have one particular lead organization with, say, you at the head of it, who could work with foreign entities; because it's a global market.

And negotiating with foreign entities, it seems to me, would be difficult if you had a tripartite group which had a shifting chairman or something.

It would seem to me that it would be far better, in view of the fact that the Fed does the deal with central banks anyway around the world, to have the Fed in charge.

Chairman GREENSPAN. I would think, Mr. Chairman, that, in the event that there were a tripartite group, that relationships with foreign entities probably would fall to the Fed as agent for the group.

One can't obviously know in advance; when confronted with a serious problem, there is a tendency of regulators to try to come together.

And I certainly saw that occur in the October episode. The advantages of having a single agency are as you have postulated them.

The disadvantages are also quite numerous. And in our judgment, in this respect, are overwhelming relative to the advantages.

But it's not something which I would say is self-evident or something which I would want to go to the barricades on, because there are various ways in which the same thing can be accomplished.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

ARE THE PROBLEMS BEHIND US?

Chairman Greenspan, I'm a great admirer of yours, as you know, and I've said so today. Now I'm going to be very blunt about proposing something to you.

I've read your statement twice. I've listened to you deliver it. And I've listened to your responses to it. I have to say to you that I don't detect any great sense of urgency that much be done here.

I think your statement generally conveys a sense of confidence that we're now in pretty good shape.

In essence, the market was overvalued and we had a real blowoff. But, now we're down to lower levels that are more realistic.

And the implication, I think, is that the problems, by and large, may be behind us. I don't know whether that's what you intended to convey or not, but that's the flavor that I get.

Now we're 3½ months past the event. You're right in saying that we don't have yet in hand the SEC study, but we've had the Brady Commission study for awhile. It's, I think, very thoroughly done within the time limits that they had.

And, today, I've not heard, unless I've missed it, a direct endorsement of any of the Brady Commission recommendations that the Fed is thinking about it, but isn't ready to come down squarely for or against any of them specifically, except in the case of not wanting to be designated as the lead agency.

So there are a couple of areas where the Fed is, in a sense, dissenting from the Brady Commission.

But, apart from that, I get the feeling that there's a sense at the Fed that things may be all right at this point and that there is no great sense of urgency for anybody to do much of anything right away.

If you feel differently than that, I'd really like to know how and where because I don't want to take away the impressions different than the one you want to give.

Chairman **Greenspan**. Senator, I think I do.

The reason basically that we are not showing a degree of urgency is largely because we have not yet seen the SEC report and have not really fully filtered through all of the various different issues in a way which we feel comfortable with, in a manner which would enable us to come forward with a set of legislative recommendations.

At the chairman's request, we will have that by March 4. I don't want to communicate to you that we think everything is behind us, that it's a one-shot episode and we don't have to worry about these things any more, because I don't think that's true.

Senator **Riegle**. I'm sorry?

Chairman **Greenspan**. I don't personally believe that, and I don't think my fellow Governors believe that.

I do think, however, we would argue that merely doing something for the sake of doing something is not going to be productive. We want to be certain that the recommendations that are forthcoming from the Board of Governors in legislative language are something which we, as economists, as regulators, as analysts, are willing to stand by.

The Brady report itself, remember, does not have specifics in its recommendations. It is talking in generic terms. And we subscribe to their basic analysis. I think it was an extraordinarily good job they did, especially in so short a time.

I must tell you, when I first heard what their conclusions were and what they did, I was very impressed. It was an extraordinary job, but they are talking about generically having circuit breakers.

They have not specifically addressed what type, where and how coordinated, what's the international relationships. There's a lot of issues involved when we talk about circuit breakers.

Similarly, when they talk about margins, they talk about coordination. Well, on both of those very crucial issues, we are essentially where they are; we agree with them and we are in favor of what they are arguing.

The problem of coordinating clearing houses and the whole issue of intermarket activity is a very complex thing. And I submit to you that, even on March 4, when we come up with the specific legislative recommendations, we are unlikely to have fully thought that one through.

The nature of the clearing processes are very significantly different from one exchange to the other. And a means by which they are better coordinated requires a detailed understanding of an extraordinarily complex set of relationships.

I'm not certain whether we have the capacity at this stage to be up to that challenge by March 4, but we will try.

Senator RIEGLE. I take it from what you've just said, which, to me, sounds somewhat different than I think the tone that I've gotten from the rest, that I referred to, that you do, in fact, feel some sense of urgency, that your thinking tends to run parallel to that of the Brady Commission, generally speaking?

Chairman GREENSPAN. That is correct, yes.

Senator RIEGLE. Albeit the fact that you don't want to be the lead agency in terms of having to monitor and police everything, and that you are moving in a very deliberate way yourselves to come back with the precise recommendations as to how the mechanisms might be changed or put in place, that you don't feel yet ready to say in a specific way.

Is that a fair summary?

Chairman GREENSPAN. That is correct. I do not want to convey, however, that we are concerned that the markets are teetering and that they need an immediate patchwork. We don't believe that. I don't think that's an appropriate view of what, in fact, the approach to October 19 should be.

Senator RIEGLE. Well, I don't want to try to in any way have you say that or sort of somehow push you in that direction.

Chairman Brady, however, when he concluded his remarks—I don't know if you've had a chance to read his full statement, but he chose a phrase that I think caught the attention of the committee.

It was to the effect that we are looking down the barrel of a gun, and the gun is loaded.

The implication is, if we don't move with some dispatch to implement some change, it's likely to go off in our face. That conveyed a clear sense of urgency, as he did, I think, throughout his comments today.

So I guess what you're saying is that you think we've got some time to do this in an orderly way, but we should also have a keen sense of the need to take some further steps here.

Chairman GREENSPAN. Yes. Let me go further, Senator.

I don't think we have an alternative to doing it in an orderly way because it's quite conceivable that we could construct a legislative solution to the October 19 event which would be counterproductive.

That would be the worst of all possibilities.

Senator RIEGLE. I think that's right.

And the rest of us, I think, are of the view that we don't want to find ourselves back in the crisis management situation. And I'm sure you don't either.

We were all on the phone back at that time trying to fathom what was happening. Everybody had a piece of the problem.

Nobody really was in a position to collect the whole problem at the time, and we had a narrow escape.

Everybody has basically said that we came very close on Tuesday to having the New York Stock Exchange shut down. No one is quite sure what that would have meant; no one wants to find out.

But we had a narrow escape and I think the concern that many of us had is we don't want to come back to that point again. I know you don't either.

It seems to me there is some premium on working our way through figuring out what precise adjustments we need to make, and then making them—not just hoping that if we all sit tight, we won't be tested again.

Chairman GREENSPAN. I agree with that, Senator.

Senator RIEGLE. Thank you very much.

The CHAIRMAN. Mr. Chairman, Martin Mayer, for whom I have great respect and who is a brilliant man, had an article in Barron's magazine in which he said some time ago:

The SEC had changed the rules on selling in the market.

As you know, that was something that happened in the early 1930's and it drove the market way, way down.

As a result, the rules were changed earlier to prevent selling on the downside.

Now, apparently, they have been modified so that, whereas a brokerage firm that is handling many securities cannot as a whole be in a position, a short position, and then sell on the down tick; that if it has a number of accounts and if somebody wants to sell on the down tick, they can do it.

Mayer claims that this had a real force. He analyzed it quite carefully—several billion dollars of sales, he said, could be documented as to perpetrated as to selling on the down tick.

He thinks that's a mistake.

Now, the former Chairman of the SEC Shad indicates that he has had second thoughts on it. Apparently, this change in the SEC rules took place when Shad was Chairman, and he's indicated some concern about that.

Are you familiar with this problem?

Chairman GREENSPAN. Are we talking about short sales on October 19?

The CHAIRMAN. I'm talking about short sales on October 19 and 20.

Chairman GREENSPAN. I'm not familiar with that. I'm familiar with the fact that the SEC rules changed, but I'm not familiar with the issue of precisely how it affected October 19.

The CHAIRMAN. I intended to get into that with Mr. Brady. I did not. But I will certainly get into it of course with the Chairman of the SEC.

RESPONSE BY AMERICAN AND FOREIGN BANKS

Mr. Chairman, according to just released SEC reports on the crash, foreign banks did not respond as well as American banks in meeting the extraordinary credit demand of securities firms.

The SEC reports that some foreign banks reduced credit or raised interest rates. To the extent that foreign banks are increasing their presence here, what implications, if any, does this fact hold for the credibility to manage a crash with a greater need for global cooperation?

Chairman **Greenspan**. The question of the financing of securities firms is an issue which fundamentally resides with the individual banks, whether they be branches or agencies of foreign banks, or whether they be American banks in most instances.

In virtually all instances, as I indicated very early on, we were quite satisfied with the way the banking community as a whole functioned during that particular period.

One of the problems that exists with any individual bank irrespective of whether it is a foreign-owned or a domestic bank, when it pulls credits or is discovered to be less than forthcoming to regular customers, is that they lose the business.

I think it's not in my judgment a reason. I mean, I don't believe that the American banks behaved as well as they did because they had this eleemosynary view of the way our system works, and had a whole set of notions of how to protect——

The Chairman. Let me interrupt. It might be because of what you indicated the Federal Reserve communicated to the banks:

Not to panic on the downside, to be cautious but not cautious to the point of panic.

Perhaps it wasn't that effective.

Chairman **Greenspan**. I frankly don't know the evidence on that specifically bank by bank, but if it's in the SEC report, we will look at that.

The main point at issue here is that it is in the self-interest of banks that lend under those conditions to regular customers, because it's under those conditions that they tend largely to maintain that very important and, I think, quite profitable business under regular conditions.

So there is a very real incentive to lend under those conditions. And as far as I can judge, banks generally have done that. And I would assume they will continue to do that, foreign or otherwise.

The **Chairman**. Let me pursue another question, then I'll yield to my colleagues.

In 1984, the Fed's economic staff produced a report on margin requirements. Chapter 6 of that report, your economists note that one objective in regulating margin is to restrain leverage, to limit the formation of speculative bubbles.

I quote from the study:

> The key issue that must be evolved is that whether leveraged trading of stock index futures has the same potential for influencing the behavior of stock prices and creating risks for customers as their brokers as those trading in the underlying stock market.

The economist concludes that it does and suggest, quote:

> If margins in the latter market are to be regulated, so should margins in the closely related futures market.

First, do you agree with the conclusions of the Fed study?

Chairman **Greenspan**. Yes, sir. I think, as best I recall, that made a good deal of sense.

The **Chairman**. Do you believe that self-regulatory organizations are capable of setting their own margin requirements to provide adequate leverage control and not merely collateral guarantees for our desired social objective of margin setting?

Chairman **Greenspan**. Let me say this. As a concept of program trading has evolved, there has been increasing pressure for the various SRO's to come together on rationalizing the various different types of margin requirements that they set.

In our view, that is an appropriate direction to move. But we recognize that it is conceivable on occasion that, in fact, that may not be the way it comes out. That's the reason why we are talking in terms of some oversight group to make certain that, in the judgment of those who are independent of the SRO's, that the types of margin setting that they are implementing make sense from the total systems point of view.

But I wouldn't want us—that is, the regulators—to impose any margin requirements unless, in our judgment, having examined what the SRO's were doing and why they were doing it and found that it made no sense.

The **Chairman**. Senator Garn?

Senator **Garn**. I have no further questions at this time, Mr. Chairman.

The **Chairman**. Senator Dodd.

Senator **Dodd**. Mr. Chairman, I've got to vote. And the Chairman was very gracious and gave me a response to the question I asked about the potential impact of repealing Glass-Steagall. I've seen the same studies that the impact of Glass-Steagall may have been overstated over the years—not that you said that, but there was that implication.

I wonder if you might just pursue that notion with me a little bit further.

DEREGULATION

Have you, as I understand it, generally drawn the conclusion that had we had a deregulated market, it would have made little or no difference on October 19 and October 20.

Some have argued that October 20 was a far more serious event than October 19.

Could you elaborate a bit further? Because this is obviously a major issue for us.

Chairman **Greenspan**. We are talking about deregulation and Glass-Steagall.

Senator **Dodd**. And why it wasn't important in the 1929 and 1962 crises.

Chairman **Greenspan**. If you go back and look at your history of the Glass-Steagall enactment, there are really two types of issues involved. One is the egregious actions of a number of individuals who were either commercial bank presidents who dealt in stocks in a manner which was inappropriate, or securities violations, which, under the Securities Act of 1934, were subsequently made illegal.

There's a whole series of other issues which, in effect, stipulated that the existence of securities affiliates in banks led to bank failures.

The evidence of that, as far as I can judge, is virtually nonexistent.

But, my recollection was that there really were no significant instances, maybe one or two as I recall, in which the failure was attributable to the securities affiliate.

There was a general view that that whole process of how what occurred in the thirties really resulted from those securities affiliates.

I think what was involved was a number of individual actions which have subsequently been made illegal and are still illegal and would be illegal even if the Proxmire-Garn bill was passed by the Congress.

Senator DODD. Thank you very much, Mr. Chairman. I have nothing further.

The CHAIRMAN. I just have one more question that I'd like to ask Dr. Greenspan.

The Fed currently has limits on the amount of credit it extends on the Fed wire. These so-called caps on daylight overdrafts are designed to protect the Federal Reserve from excessive credit risks.

Some draft reports have suggested that the caps limit the amount of funds that could be transmitted on October 20 and 21, intended to freeze up the exchanges in the clearing house in Chicago.

Would you describe the impact caps on daylight overdrafts during the stressful period of October 1987?

Chairman GREENSPAN. It's difficult to know. I haven't looked at it in detail, but I did look at those reports.

In many instances, there were probably credit limits imposed by individual institutions and they appear to have been as the result of the inability to have significant daylight overdrafts.

But I haven't looked at that in great detail. My impression is it was not a significant problem, but I will examine it further and submit further testimony for the record on that question.

[Chairman Greenspan subsequently submitted the following information:]

During the period of the stock market break of October 1987, neither biweekly nor daily daylight overdraft caps had a restrictive effect on payments activities of money center banks in New York and Chicago. For example, during the period October 19-26, the large banks in New York and Chicago used between 13.8 and 66.2 percent of their overdraft caps. From these utilization rates, it is apparent that the money center banks had surplus overdraft capacity and so were not likely to delay funds transfers because of the Federal Reserve's overdraft limits.

These data lead us to conclude that the daylight overdraft caps did not have an adverse or destablizing effect on payments activities during the stock market break in October 1987. As noted in the report of the Presidential Task Force on Market Mechanisms, "gridlock" may have occurred at different times on October 20, 1987, as certain banks declined to transfer funds for a customer until they received covering funds for that customer's account from another source. This type of credit judgment exercised by the money center banks, however, was not related to the Federal Reserve's daylight overdraft limits.

The CHAIRMAN. If the bill that Senator Garn and I are introducing on Glass-Steagall were passed, do you believe that the Banks' willingness to lend to independent securities firms would be affected in any way?

Chairman GREENSPAN. I don't think so, Mr. Chairman.

Banks lend to securities firms largely because it's good business. As I said just a few moments ago, I think the reasons that they were active in lending during October 19 and 20 and immediately thereafter is that they perceived it as lending to their regular customers, who are a very important part of their commercial banking business.

I can't imagine any circumstance which would alter the fact that if you have good customers out there, you will tend to accommodate them in periods of trial because that's the way you make them good customers.

I see nothing which suggests to me any change in that particular attitude as a consequence of the type of legislation you are offering to the Congress.

The **Chairman**. Of course, the opponents of our bill would argue that that customer becomes a competitor. And when the competitor is in great difficulty, a ruthless bank might take advantage of the situation to eliminate the competitor.

I think it's very farfetched. Obviously, I don't believe it.

Chairman **Greenspan**. I don't believe it either. I think it's pretty farfetched. First of all, the market for loanable funds for securities operations is very competitive. And if I, as bank X, decided that since I have a securities affiliate, I wanted to drive one of my other, older customers out of business, first of all, I'd have to make the presumption that no one else would lend to him—which already assumes he's in trouble to start with—or basically that, somehow, even if I didn't lend to him, I would enhance my own securities affiliate.

I know of no way that any of that makes sense to me. My major concern is if I were a banker and if a securities affiliate customer of mine were in trouble, what I would see out there is that if he had possibilities of staying in business and is not insolvent, if I were to help him now, I'm going to have a very good customer for a long period of time.

And I will tell you, my inclination would be much more prone in that direction than trying to calculate some marginal, probably insignificant advantage to my securities affiliate that is likely to surface as a consequence of eliminating another competitor.

It makes no sense to me.

The **Chairman**. Thank you very, very much, Dr. Greenspan. You've done an excellent job. We're in your debt and you rise in esteem every time you appear before us.

The committee will stand in recess until 10 a.m. tomorrow, when we hear from the Honorable David Ruder, Chairman of the Securities and Exchange Commission; and Kalo Hineman, Chairman of the Futures Commodity Trading Commission.

[Whereupon, at 4:45 p.m., the committee recessed, to reconvene at 10 a.m., Wednesday, February 3, 1988.]

"BLACK MONDAY," THE STOCK MARKET CRASH OF OCTOBER 19, 1987

WEDNESDAY, FEBRUARY 3, 1988

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 10 a.m., in room SD–538, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Riegle, Sarbanes, Dodd, Dixon, Sasser, Sanford, Graham, Garn, D'Amato, Hecht, Gramm, Bond, and Karnes.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

Our witnesses this morning are David Ruder, Chairman of the SEC; and Kalo Hineman, Acting Chairman of the Commodities Futures Trading Commission.

Gentlemen, your SEC and CFTC predecessors came before this committee in 1981 to help us work out who should oversee the financial futures market. At the time, the CFTC chairman stressed that the fledgling financial futures products were distinct from equities; they were moved by general economic factors and unconnected to the factors that affected the stock market.

Today, I think all of us agree that this viewpoint cannot be defended. Futures and equities markets are linked. What's more, the once fledgling futures product has become a giant with volume on a given day 1.7 times the volume of equities trading.

As a Congress, we are left with a need to review our policy and regulation. While the expansive reports published by your agencies underscore the complexity of the issue before us, I think the hearings yesterday demonstrated there is an emerging consensus for action. The facts of financial life are that we have a single financial market; that market demands better coordinated regulation, consistent settlement procedures, more comprehensive and timely information, a careful examination of margin requirements, and possibly price and time limits on trading.

You and your organizations have issued thoughtful reports on how we can act to bring the market in line with new technology. We look forward to your testimony.

Senator Garn.

Senator GARN. I have no opening statement, Mr. Chairman.

The CHAIRMAN. Senator Riegle.

OPENING STATEMENT OF SENATOR RIEGLE

Senator **Riegle**. Mr. Chairman, again, from the point of view of the Subcommittee on Securities which I'm privileged to chair, I want to make a couple of additional observations along the lines of some of the things that you have said.

We have today the heads of the two regulatory agencies that are most directly responsible and accountable for ensuring that we do not experience another major system breakdown such as we saw in October.

Yesterday, Chairman Brady expressed the belief that the market for stock, stock index futures and stock options are in fact one market. If that is the case, and I believe that essentially it is, then the SEC and the Commodities Futures Trading Commission must clearly be forced to do a better job than they have done in the past of coordinating regulatory policy, although we are not quite clear on how that's best done.

I think the Brady Commission and other studies of the market crash also raise significant regulatory concerns over the treatment of investors and very especially small investors in the kinds of events that we saw on October 19 and 20. The level of complaints that we have received about brokers not being available, erratic and and erroneous order execution, perhaps preferential trading for some brokers for their own accounts ahead of those of customers and the performance of market makers all indicate that we need to really look at the sufficiency of our regulatory system.

If we are going to maintain confidence in the markets, which is critical to the future of our economic system, then small investors have to be confident that they can come into the market and get a fair shake. If they don't have that, then I think they are going to step away from the market and I think the consequences for economic future are greatly damaged by that.

Now, Chairman Ruder, I think you've gotten off to a very strong start and you've been hit by a tidal wave of activities since assuming this job, but you I thought were very straightforward in your initial comments to this committee when you were here seeking confirmation. You made it clear that you put market volatility right at the top of your list—this was ahead of the crash—and that you were dedicated to an aggressive enforcement program. You used those words and what we have seen so far shows that you meant what you said and you have been persisting in that fashion, and I appreciate that leadership and I would say, as well, we are all going to have to be part of giving even more leadership just given the nature of the additional tests and traumas that have come since you took this job.

One other thing I want to say is the SEC can't do its job if it doesn't have adequate resources and, frankly, I think it's a disgrace that the administration over a period of years has not seen to it that the SEC has had the budget money that it needs to really be in a position to keep up with these changing market conditions and innovations. And we've raised this issue a number of times here in the committee to try and put light on that problem and to make sure that the SEC, which is a self-financing operation and in fact is a profitable operation to the Government, is in a position to have the adequacy of staff resources to be able to go out and deal with the kind of changing and evermore complex marketplace we see in the financial system, now worldwide in scope.

So if we're going to have the kind of SEC performance we want, we're going to have to put the resources there in sufficient amount to enable our regulatory agencies to stay abreast of what is actually happening out in the markets. There's still a shortfall in that area and while I greatly admire the dedication of people at the SEC, they too can be overwhelmed by the realities in the market system if they are not sufficiently staffed and do not have the resources available that prudence would suggest.

So we are going to continue to persist in that fight to see to it that you get what you need to work with. When we asked John Shad that, your predecessor, he kept downplaying it—"No, we didn't need the resources and so forth"—and I think history has shown that that was way off the mark. So we'll be very interested in hearing from you this morning.

The CHAIRMAN. Senator Hecht.

Senator HECHT. Thank you, Mr. Chairman.

I did not expect to say anything, but I would just like to give you the other side of the distinguished Senator from Michigan's argument. I feel legislation at this time is absolutely premature. I think the free market must be given a chance to operate and until such time as you suggest legislation to us that you think you need I don't think we should suggest legislation from the Senate to you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Hecht.

Senator Dixon.

OPENING STATEMENT OF SENATOR DIXON

Senator DIXON. Mr. Chairman, I'm pleased to be here this morning as the Banking Committee continues its oversight hearings into the cause of last October's stock market crash. Today, of course, we are hearing from the distinguished Chairman of the Securities and Exchange Commission, my good friend David Ruder, and the distinguished Acting Chairman of the Commodities Futures Trading Commission, Mr. Kalo Hineman. I look forward to their testimony and to their recommendations for improving our market mechanisms.

I want to make three short points, however, as we begin this hearing, Mr. Chairman.

First, I hope my colleagues will keep in mind Chairman Greenspan's testimony on portfolio insurance activity yesterday. He stated that:

> The dramatic experience of October has introduced more realism into such risk-shedding investment strategies and in the process has defused some of the potential pressures on the system in the future.

Essentially, what the Chairman is saying is that the market itself is correcting whatever problem may have existed in this area. I hope that the committee will keep this fact in mind and will not focus so tightly on the past that we end up making the same mistake that the military is often accused of, fighting the last war instead of the next one. We need to focus on preventing future problems, not on solving past problems that may no longer be real issues.

My second point is also drawn from Chairman Greenspan's testimony. He disagreed with the recommendation of the Brady Commission that a single intermarket regulator be established. Instead, he recommended greater coordination between the SEC and the CFTC and perhaps the Fed or Treasury to take advantage of the market expertise in the agencies that already regulate our financial markets. I think it's a sound recommendation and I am pleased that Chairman Ruder and Acting Chairman Hineman will both testify this morning that coordination is an acceptable way to approach this issue.

Third, I am pleased to see that Chairman Ruder's prepared statement reflects an understanding of the differences between stock and futures margins. I commented on these differences at some length yesterday, as everybody on the committee knows, so I will not take the time of the committee to do so again now. I would like to note, however, something that my colleagues may not have noticed.

By October 20 last year, total margin on the Chicago Mercantile Exchange's S&P contracts was 38 percent of total contract value, and total margin on the Chicago Board of Trade's major market index contract was 51 percent of total margin, and these are not low margins. They are significantly higher, in fact, than broker-dealer margins on the New York Stock Exchange and I think I established beyong any quarrel yesterday that the professional trader can deal with a margin of 25 percent on a regular basis. So the Board of Trade and the Mercantile were both substantially higher than any professional trading in the NYSE.

I can't support Chairman Ruder's specific recommendations on margins, but I note that his own testimony indicates uncertainty as to the extent to which futures margins contributed to last October's market break. I think we should be very sure in an area like this before we act. The consequences of a mistake could be tragic for our financial markets, including the stock markets. However, I do look forward to continuing to discuss the issue with him, with Chairman Hineman, and with the other interested parties in an effort to ensure that any action that this committee may eventually take is reasonable, is workable, and directed to the real problems.

I thank the Chair.

The CHAIRMAN. Thank you very much.

Senator Bond.

OPENING STATEMENT OF SENATOR BOND

Senator BOND. Thank you very much, Mr. Chairman.

Sometimes, those of us in Congress are accused of wanting to throw money at a problem that we cannot solve. By the same token, I think a valid corollary is that oftentimes the more difficult the question, the more paper the bureaucracy would throw at it.

Chairman Ruder, I certainly appreciate your delivering this massive package to us, but frankly, I hope that there is something in here for those of us who don't have the time to read the whole thing and I hope that you are not paying your staff by the pound for the documents they put out. Frankly, I am concerned about the volume. I think that you can hide facts by putting too much verbiage around them.

I look forward to your testimony because yesterday I think we got a very clear indication from Senator Brady and from Chairman Greenspan that something needs to be done. I am not confident that the free market worked properly on October 19. I believe that there are too many instances where small investors' interests were trampled, and we are looking forward to hearing from you some specific recommendations on how we can restore the confidence of the small investor in the stock market.

I think the statistics and the figures indicate that many of the small investors, the backbone of the market, are afraid that they are going to take risks that are beyond the economic risks of investment and they risk being put at the back of the line when the large investors seek to change their positions. I think that this is a critical time for restoring confidence in the stock market and I look forward to your specific recommendations.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Senator Gramm.

OPENING STATEMENT OF SENATOR GRAMM

Senator GRAMM. Well, Mr. Chairman, let me just begin by my sharing a point with Senator Bond. Anybody that's got a staff that could write that does not have too small a staff. In fact, I would argue that that would be a fertile area to look at staff reduction.

Also, a 26-page executive summary—maybe you need a chief executive summary that summarizes the summary. [Laughter.]

Chairman Ruder, I also observe, I think you've got less hair than you had when you were here last.

Mr. RUDER. That's true. [Laughter.]

Senator GRAMM. It's clear, Chairman Ruder, you have a tough job. Like other members of the committee, we want to try to help you do the job. I simply want to reiterate that I kind of like turning on the TV at night and hearing talk about Wall Street and what happened on Wall Street. I don't want to some day turn on the radio or pick up the paper and hear about some other street in London or Paris or Tokyo where the equities market has moved because we didn't have enlightened policy.

I just want to urge you in working to improve the system to look at the costs and benefits of everything we do. I am deeply concerned about an equity market where we have a 500 point drop. Clearly, that is bad for the American system. It undermines confidence. Everybody talks about it hurting the small investor. It hurts everybody.

My concern about the equity market is not a concern about Wall Street or about Chicago. It's a concern about Main Street in Waxahachie, TX, where people have a stake in what's happening in the equity market even though they may not know it.

So I want to urge you in coming up with a solution to this problem to work to see that we don't do more damage to the system and cost ourselves more in terms of economic growth, which is my bottom line in the whole debate, than we generate in terms of stability. We could guarantee there would be no more price declines by eliminating the equities market, but obviously we don't want to do that.

Finally, I'd just like to ask your help, as we are besieged by all of the political forces who are going to try to use this crisis to benefit themselves, who are going to try to tilt the law in such a way as to benefit particular kinds of traders or to benefit one market relative to another. Your input in terms of helping us to understand the market is going to be critically important it seems to me in those deliberations and I look forward to working with you to help you do the tough job that you signed onto voluntarily.

The CHAIRMAN. Thank you, Senator Gramm.

Senator Graham.

Senator GRAHAM. No opening statement, Mr. Chairman.

The CHAIRMAN. Before you start, Mr. Chairman, let me just say that I think that the SEC has done a superb job in that detailed statement. It is many, many pages. You have to be a rapid reader to go through it, but I'm sure that over the months that we'll be studying this problem, working on the problem, that the kind of detailed work that your excellent staff did is something for which we will be very grateful. I'm sure that your statement itself, which summarizes much of the SEC report, I think puts it in an excellent, useful perspective.

Senator RIEGLE. Mr. Chairman, would you yield to me for 30 seconds? I'd be happy to have the time taken off my question period when it comes. But I want to respond in a sense to some of the comments that have been made already this morning.

That is, when the stock market crashed, there was roughly $1 trillion worth of value that evaporated in a very short period of time. There were some big players that got hurt, but a lot of the big players could take that hurt in stride in a different way than a lot of the little people that were hurt. $1 trillion is a lot of money and we can sort of make jokes about it if we want to or put it in a humorous vein, but it's a very serious fact and it could happen again. We were told just yesterday by Nick Brady who headed the Commission who said that some things need to be done. So I think it's always good to find some room for humor in the darkest of circumstances, but I think if we don't face the fact that we've got a serious problem and a serious problem with investor confidence for the future, I don't think we meet our responsibility.

And I would hope that we could view this inquiry over a period of time in that kind of light.

The CHAIRMAN. Senator Sanford.

Senator SANFORD. Well, I do indeed commend the SEC for its report. It looked like it was right heavy, but this is a heavy subject. I don't have any opening statement.

The CHAIRMAN. Thank you. At this point I will insert in the record statements of Senators Sasser, D'Amato, and Karnes.

[The statements follow:]

STATEMENT OF SENATOR JIM SASSER

Mr. Chairman, I would like to take this opportunity to compliment Mr. Ruder of the SEC for what I consider to be a transition to a much more pro-regulatory posture. What is it they say: "A confirmation conversion?" or is it rather an "October 19th conversion?"

Indeed, I agree with much of what Mr. Ruden has told this committee recently with respect to the proposed repeal of the Glass-Steagall Act. And I think the SEC's newly proposed legislation to define insider trading has many strong points.

I agree with him that the SEC is woefully underfunded in view of the enormity of its agenda. As a member of both the authorizing and appropriating subcommittees having jurisdiction over the agency, I hope we will be able to do something about that.

However, on the market crash, I find Mr. Ruder's statement that the October 19 meltdown is "a very strong indication that something is wrong in the way the markets are functioning," a bit of an understatement. I think that carries through to this report on the market crash. For all its 900 pages, I don't find the sense of urgency contained in the Brady report. It is very narrow focused. There is not too much on the treatment of individual investors. But most importantly, I don't see any significant recommendations. Where's the beef?

Thank you, Mr. Chairman, I look forward to Mr. Ruder's testimony and that of the distinguished witness from the CFTC.

STATEMENT OF SENATOR ALFONSE M. D'AMATO

Now that all the reports are in and we've had a chance to examine them, it appears that there is substantial agreement among the regulators on several critical points that should be central to our inquiry. First, the regulators are in general agreement that certain economic and political factors beyond the control of the equity and futures exchanges triggered the crash.

Second, new trading technologies such as portfolio insurance, stock index arbitrage and program trading, although not the sole cause of the market break, have been found to be significant factors in exacerbating and accelerating the decline.

Third, lower margin requirements and the absence of short sale restrictions in the futures markets presented the opportunity for greater speculative selling than in the equities markets. Further, the extent of such speculation and its impact on the equities markets was better realized during the events of October 19 and 20.

Fourth, we are dealing with one huge capital market made up of several component parts. Each of these component parts has evolved separately under separate regulators charged with different legislative mandates by different congressional committees. Any reforms which attempt to harmonize the regulation of these trading markets must take these distinctions into account.

Fifth, there is a need for more coordination between both the Federal and self-regulators of these trading markets. This coordination should be undertaken on a day to day basis and not be limited to crisis management situations.

While considerable agreement exists among the various reports about the causes of the market break and agreement that action must be taken, at present, there is little agreement about what specific reforms are needed to avoid overloading the system. While we have identified the problems, we have yet to address adequate solutions to those problems. I hope that the Federal regulators, the exchanges and market participants will work together to develop adequate solutions to these problems. Many of my colleagues and I believe that you are in the best position and have the most complete knowledge to respond to the systemic weaknesses identified by the market break. A failure to develop adequate and timely solutions will only result in Congress taking a direct role by mandating reform. Statutory mandates are less desirable because they lack the flexibility of regulatory solutions developed by an industry founded upon the principle of self-regulation.

Rather than focus on the causes of the crash, I hope that these hearings and the ones which follow will focus upon the solution to the problems which surfaced on the 19th and 20th of October.

OPENING STATEMENT OF SENATOR DAVID K. KARNES

I want to commend you Mr. Chairman and all the participants appearing before this committee this week for the expeditious response shown to the stock market break. The issues are numerous and extremely complex. I am very impressed with the detailed analysis that has been prepared by the Brady Commission, Federal Reserve, GAO, CFTC, NYSE, AMEX and others in presenting to this committee and the public a fair and unbiased accounting of the events before and after the October 19 break.

I certainly want to take this opportunity to commend Chairman Greenspan and the efforts of the Federal Reserve in calming the extreme concerns generated by the events surrounding the market break. Chairman Greenspan's exceptional historical knowledge proved critical in the Federal Reserve's handling of the latest crises. The coordinated effort of the Federal Reserve with Chairman Ruder of the SEC, and the CFTC proved critical in reacting to the events surrounding October 19.

The precipitous decline in the stock market is largely attributable to a loss of investor confidence in the fundamentals of our economy. While there may have been several factors contributing to that loss of confidence, the continued Federal budget deficit, unexpectedly high trade deficit, and an announcement by the House Ways and Means Committee that they were filing legislation to eliminate tax benefits associated with the financing of corporate takeovers were largely responsible. This overall lack of confidence caused a combination of intense selling pressure, market mechanism failure, and breakdown of information which put extreme downward pressure on stock prices and tremendous increase in volatility. As the committee continues to discuss a number of the technical problems that resulted from this intense selling pressure, it is important for us to keep in mind the ultimate causes of that loss of confidence.

I am particularly concerned about the effect that the stock market decline has had on the small investor and the smaller companies. Senator Brady commented yesterday that the increased volatility and unease has slowed new investment, hampering the raising of capital, particularly by smaller companies. This situation could have a very detrimental impact on the majority of companies in my State. Consequently, to the extent that we as members of the Banking Committee, the regulators of the various stock markets, and the market representatives themselves can alleviate some of the anxiety on the part of the investment community, and efforts will be very constructive indeed.

As we proceed to discuss the various circumstances surrounding the market break and the actions that we can take to restore the investor's confidence, we need to continue to be mindful of the close relationships among our domestic securities markets, their derivitive products, and our interrelationship with various markets abroad.

I want to compliment the efforts of Chairman Ruder and Chairman Hineman in preparing for this committee. I am very impressed with the detail in their analysis and look forward to their testimony.

Thank you Mr. Chairman.

The Chairman. Chairman Ruder, go right ahead, sir.

STATEMENT OF DAVID S. RUDER, CHAIRMAN, SECURITIES AND EXCHANGE COMMISSION

Mr. Ruder. Chairman Proxmire and members of the Senate Banking Committee: The Securities and Exchange Commission appreciates the opportunity to testify here this morning on the subject of the October market break.

I have submitted to the committee a copy of written testimony of the Securities and Exchange Commission dated February 3, 1988, under the title "Securities and Exchange Commission Recommendations Regarding the October 1987 Market Break." Except for one small section, that testimony represents the view of all five members of the Commission.

I also have submitted to the committee a report by the Division of Market Regulation of the Securities and Exchange Commission dated February 2, 1988. That staff report contains an excellent analysis of the October 1987 market break, as well as many detailed recommendations regarding the operation of the securities industry. In accordance with its usual practice, the Commission has authorized the staff to release the report as a Commission staff report. I ask that both the Commission's testimony and the staff report [1] be included in the record of these hearings.

May I add that the staff report was prepared by approximately 110 able and dedicated staff members under the leadership of Richard Ketchum, the Director of our Division of Market Regulation, and two Associate Directors, Mark Fitterman and Brandon Becker. These staff members worked tirelessly to finish their report within a very short time period; on behalf of the Commission, may I record our thanks for their fine work.

The events of the October market break are well known to you. In summary, the market break involved extreme volatility, unprecedented volume, and the largest market decline in the nation's history. This market decline was triggered by changes in perceptions regarding investment fundamentals and by economic conditions. In part, it represented a response to a market that had reached unprecedented heights and that was widely regarded as subject to a downturn.

The expected downturn occurred. It is the size and rapidity of that downturn that concerns us all. The task of the Securities and Exchange Commission in this environment is not to find fault, but to seek ways to prevent repetition of the October 1987 market break.

Understanding of market events will be aided by a description of current institutional investing practices. During the last decade institutions have amassed increasingly large portfolios of securities, and increasingly desire to trade the equivalent of all or a portion of an entire portfolio. This desire was satisfied in part by the creation of index trading. It is now possible to buy or sell the equivalent of a portfolio of securities by buying or selling an option or futures index product. It is also possible to do so by buying or selling a portfolio of securities directly. The automated method for routing orders to buy or sell a portfolio of securities to the New York Stock Exchange is the Exchange's Designated Order Turnaround system, called DOT. In connection with their portfolio trading—sometimes called program trading—the large institutions have also developed sophisticated index arbitrage, index substitution, and portfolio insurance strategies.

A significant factor in the October market break was large stock and futures sales by institutions pursuing a variety of these strategies. During certain critical trading periods on October 19 and 20, index arbitrage or portfolio insurance or both accounted for between 30 percent and 65 percent of total New York Stock Exchange volume in the S&P 500 stocks. On October 19 and 20, institutions holding multibillion dollar portfolios simultaneously pursued similar strategies in a declining market, causing a rush for the exits that accelerated the decline and may have extended it beyond levels that can be accounted for by fundamental economic factors alone.

The Commission has concluded, along with others, that the markets for stock index futures, stock index options, and stocks form a linked market. Under current conditions, new institutional trading mechanisms and strategies in this linked market can cause extraordinary peak volume and volatility.

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[1] Information can be found in the SEC report entitled, "The October 1987 Market Break," by the Division of Market Regulation, February 1988.

The Commission recommends three broad approaches for reform: increasing the capacities of the markets, improving the coordination among the markets, and retarding the volatility and volume of trading during crisis periods.

May I emphasize the importance of the first two approaches.

The Commission believes that in normal times the derivative index markets perform an important economic function. They provide a means by which institutions may adjust their portfolio positions quickly and efficiently. By focusing on our primary recommendations on increasing the capacities of the markets and coordinating the futures, options, and stock markets, the Commission is suggesting that the interlinked markets should be made more efficient.

Given the increasing automation and competition from our foreign markets, the Commission believes that this must be our first task. We do acknowledge, however, that steps need to be taken in the near term to decrease liquidity demands and avoid the selling excesses that caused such unusual volume and volatility.

The Commission has set forth many specific recommendations in its written testimony.

First, with regard to the New York Stock Exchange, the Commission is recommending implementation or review of the following five measures to increase the New York Stock Exchange's capacity to manage increased volume and volatility: (1) enhancing DOT; (2) increasing specialist capital; (3) improving specialists' performance procedures; (4) creating basket trading posts on the New York Stock Exchange; and (5) publicly disseminating program trading information.

In addition to these measures, the Commission recommends a reevaluation of current short sale regulation in light of the changed market conditions and new trading strategies.

The Commission is also making recommendations regarding the stock index futures markets. First, it recommends that block trading procedures similar to those used in the stock markets be considered as a means of increasing the futures market's capacity to trade large blocks of futures.

Second, to reduce liquidity demands on the markets, the Commission recommends that the futures exchanges temporarily increase initial margin levels for stock index futures for market participants, other than floor traders, to approximately 20 to 25 percent.

Third, the Commission is recommending that the CFTC and the futures markets make express, strengthen if necessary, and effectively enforce the prohibition against front-running, a practice in which a firm for its own profit trades on the futures exchange ahead of its customer's block orders.

To improve the operations of the markets, the Commission believes that the creation of a coordinated clearing, credit and settlement system across markets should be an immediate priority. The Commission also recommends consideration of the benefits and costs of coordinated market opening and closing procedures.

The Commission also commends to the committee's attention a series of recommendations aimed at the weaknesses revealed during the market break in the operation of the over-the-counter markets, the American Stock Exchange, the regional exchanges, the Intermarket Trading System, and the options exchanges, as well as recommendations for improvement of clearance and settlement procedures. Independently, the Commission will be examining its own capital adequacy rules.

To increase the Commission's and the SRO's surveillance abilities, the Commission recommends increased reporting requirements that would require the timely reporting of large amounts of trading, including index arbitrage, index substitution, portfolio insurance, and other program trading.

In the area of regulatory authority and structure, the Commission recommends that it be given additional authority to take a variety of steps in a market emergency. Such authority should be roughly equivalent to the emergency authority the CFTC already possesses.

The Commission also recommends that immediate steps be taken to increase regulatory coordination. As a first step, the Commission is recommending that, with SEC and CFTC oversight, the self-regulatory organizations for the stock, options, and futures markets meet immediately to initiate plans to deal with volatility problems. Additionally, the Commission and the CFTC should immediately undertake a joint review of their proposals and those of the Presidential Task Force and others to determine what steps must be taken to implement these proposals. The Commission also recommends consultation by the Commission, the CFTC, the Federal Reserve Board, and the Federal Reserve Banks of New York and Chicago regarding credit, capital, and liquidity matters.

As a second step, the Commission believes that the SEC, the agency with the expertise and direct responsibility for the equity markets, should be given final regulatory authority for equity-related products, at least with respect to critical intermarket decisions such as coordinated trading halts, manipulation, and front-running rules. In addition, the Commission should have expanded review authority over both new and existing future contracts.

Third, although giving the SEC final review authority over at least certain matters may be desirable in the near term, the Commission believes that the market events of October demonstrate that the SEC should have direct regulatory authority over all equity-related futures products. I should indicate here that two commissioners specifically do not join in the latter two Commission recommendations "to the extent they suggest that improved coordination is not the appropriate approach to intermarket regulatory issues and that the Commission alone possesses adequate and responsible expertise."

Because the October events also demonstrated that the linked market now includes many foreign markets, the Commission intends to intensify its ongoing coordination efforts with foreign regulators and markets.

Finally, the Commission believes that price limits on stocks, either individual or marketwide, are not a preferable way to deal with the complicated issues of halting stock trading. The Commission also believes that position limits should continue to serve their antimanipulation function, but that decreasing these limits is not necessary at this time in order to address volatility.

The Commission strongly believes that the Nation's securities markets must be allowed to evolve if they are to remain healthy. Although both the staff report and the Commission's recommendations suggest that changes are needed, the most salient point that has emerged is that our securities markets withstood the October 1987 pressures and continue as the best and strongest in the world.

The **Chairman**. Chairman Ruder, there is a vote on the floor now. Thank you for a very fine statement. We will be back to ask questions shortly.

[Recess.]

[The complete prepared statement of David Ruder follows:]

SECURITIES AND EXCHANGE COMMISSION RECOMMENDATIONS REGARDING THE OCTOBER 1987 MARKET BREAK

Contained in Testimony Delivered By
DAVID S. RUDER
Chairman, Securities and Exchange Commission

Before the
United States Senate Committee
on Banking, Housing, and Urban Affairs

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SECURITIES AND EXCHANGE COMMISSION
RECOMMENDATIONS REGARDING THE
OCTOBER 1987 MARKET BREAK

I. INTRODUCTION

The October market break was one of the most dramatic episodes in the history of the U.S. financial markets. The steep and abrupt decline in the markets sent tremors through the professional and individual investor communities. On October 21, the Chairman of the Commission directed the Commission's Division of Market Regulation to prepare a comprehensive study of these events. The Commission's Staff Study, released on February 2, 1988, is a thorough account and analysis of the market break.

This testimony summarizes the Staff Study's description of the market break and sets forth the Commission's conclusions and recommendations. In reaching its conclusions and recommendations, the Commission has reviewed a large body of materials, including the Staff Study and the Presidential Task Force Report, in a very short time period. Both the facts and the issues are extremely complex and further analysis may well shed significant new light on October's remarkable events. Accordingly, the recommendations set forth below are subject to change upon further evaluation.

II. SUMMARY OF OCTOBER MARKET BREAK 1/

During October 1987, the nation's securities and stock index futures markets experienced an extraordinary surge of volume and price volatility. The most widely followed indicator of the U.S. stock market's movements, the Dow Jones Industrial Average ("DJIA") index of 30 stocks listed on the NYSE, declined on October 20 to its 1987 low of 1708.70. That market low was more than 1,000 points (37%) below the Dow's August 25 high of 2722.42. After erratic trading over the next few trading sessions, the DJIA stood at 1,994 on October 30, down over 26% from its August high point, although still above its December 31, 1986 level of 1895.95.

The second half of October was marked by extreme volatility and volume:

1/ The Staff Study comprehensively describes and analyzes the October market break. The Executive Summary of the Study is attached as Appendix A. The Commission in this section highlights the factual portions of the Staff Study most pertinent to the Commission's own conclusions and recommendations.

	DJIA PRICE CHANGE	VOLUME (MILLION OF SHARES)
Wednesday, October 14	-95.46	210
Thursday, October 15	-57.61	266
Friday, October 16	-108.35	344
Monday, October 19	-508.32	608
Tuesday, October 20	+102.27	613.7
Wednesday, October 21	+186.84	452
Thursday, October 22	-77.42	395
Friday, October 23	+0.33	247.5
Monday, October 26	-156.83	308.8
Tuesday, October 27	+52.56	260.2
Wednesday, October 28	+0.33	279.4
Thursday, October 29	+91.51	258.4
Friday, October 30	+55.20	303.4

Large price movements occurred to a greater or lesser extent in all of the nation's securities and index futures markets during the second half of October. In particular, prices for the most actively traded index futures -- the S&P 500 December futures contract ("SPZ") traded on the Chicago Mercantile Exchange ("CME") -- fluctuated even more widely than those for the underlying stocks (termed the index's "cash" price). During the weeks of October 19 and 26, the SPZ futures experienced an unprecedented period of trading significantly below the index stock prices. Although the theoretical value for index futures normally is slightly above the cash price ("premium"), from October 19 to October 28 the normal price relationship between the futures and stocks was inverted. With a few brief exceptions, the futures traded at a discount to the stocks. Although the discount eventually disappeared, by the end of October the price of an SPZ contract had fallen to 259.35, down 24% from its August 25 high of 341.25.

The October market break also highlighted the growing interconnections among securities markets internationally. The Staff's Study suggests that the major world markets responded quickly and dramatically to each other's price movements and that, for the most part, U.S. markets led foreign markets. These markets included strong, well capitalized markets such as London, where the Financial Times-Stock Exchange 100-Share Index fell 500 points (almost 22%) on October 19 and 20, closing the month at 1749.8, down 26.04%, and Tokyo, where the Nikkei index declined 4456.7 points (16.9%) on October 19 and 20, closing on October 30 at 23,328.91, down 10.31%. The impact of the U.S. market

break was even greater on fast growing, more speculative markets, such as the Hong Kong Stock Exchange, which closed operations for a week.

The staff reviewed trading patterns during the period from October 6 to October 21, and reconstituted program trading 2/ activities, including stock index arbitrage 3/ and portfolio insurance. 4/ The staff concluded that no single factor -- economic, structural, or psychological -- was responsible for the size and breadth of the October 1987 market break. To the contrary, the staff suggests that a variety of factors came into play during the key trading days that affected investment and trading decisions.

The staff analysis of trading suggests that the initial decline that immediately preceded the October 19 market break was triggered by changes in investor perceptions regarding investment fundamentals and economic conditions. Although these changes acted as the "trigger," institutional stock selling was the largest single direct factor responsible for the initial opening decline on October 19. Thereafter, panic selling in a broad range of stocks, caused by a variety of factors, coupled with an absence of buyers (except at distressed levels), was primarily responsible for the free-fall decline that characterized the final hour of trading on the NYSE on October 19.

Rapid, large stock and futures sales by institutions, while not the "sole cause" of the market break, were a significant factor in accelerating and exacerbating the declines. On October 19, index arbitrage and substitu-

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2/ Program trading is the trading of a whole portfolio or basket of stocks.

3/ Index arbitrage is the simultaneous purchase (or sale) of stocks that comprise or closely track a stock index and the sale (or purchase) of either futures or options on that index.

4/ Portfolio insurance is a hedging strategy designed to control market risk for a broad based portfolio. Typically, stock index futures are sold when the value of the portfolio decreases a certain percentage, and are repurchased when the portfolio regains this loss. If the future markets become congested and too costly, some portfolio insurance plans call for the direct sales of stock to supplement sales of futures.

tion 5/ program sales were 37.4 million shares, portfolio insurance sales were at least 39.9 million additional shares, and other program sales were an additional 11.8 million shares. Together they comprised 14.7% of total NYSE volume and 21% of total volume in S&P 500 stocks. During certain critical trading periods, index arbitrage or portfolio insurance -- or both -- accounted for between 30% and 65% of total NYSE volume in the S&P 500 stocks.

During specific critical time periods, total program selling represented an even more significant portion of total S&P 500 stock volume. Between 1:00 and 2:00 p.m. on October 19th, the combination of selling from portfolio insurance and index arbitrage totalled more than 40% of volume in the stocks comprising the S&P 500 index, and more than 60% in three different 10 minute intervals within that hour.

Portfolio insurance selling in stocks and futures was also significant on October 20th. Portfolio insurance selling accounted for most of the program stock trading on October 19th and 20th that was not index arbitrage. Much of that selling was done by a single large institutional investor that executed large portfolio insurance trades in both the stock and futures markets.

In addition to direct effects, the existence of futures trading and the use of derivative products in program trading strategies had a significant negative psychological impact on the markets, particularly on October 19th. A market "overhang" effect in both the futures and stock markets, demonstrated by large futures discounts, discouraged buying by market participants. In particular, institutional traders were discouraged from participating in the stock market on the buy side, specialists from committing capital to maintain fair and orderly markets, and block positioning firms from maintaining normal levels of activity.

The effects of the October market break are not confined solely to a one time dramatic change in the level of stock prices. The aftershocks of October 19 continue to affect the markets today. Quote spreads continue to be wider, and liquidity and continuity substantially lower than

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5/ Index substitution is the sale of a portfolio of stocks by an institution that owns the portfolio and the substitution for the portfolio with purchases of futures on an index that the institution's portfolio replicates. The strategy is designed to improve the portfolio's performance by capturing arbitrage profits.

before the October market break, and market volatility has been substantially higher than it was before October.

III. CONCLUSIONS AND GENERAL RECOMMENDATIONS

The Staff Study provides analyses that have led the Commission to reach important conclusions about the market. Foremost among the conclusions to be derived from the Staff Study is that the markets for stocks, stock index futures, and stock index options form a linked market. 6/ Although the three markets are physically distinct, marketplace boundaries are crossed to such an extent and with such frequency that these markets are unified. This unified market is most clearly evident for New York Stock Exchange ("NYSE") stocks. Stock index futures and stock index options are used as economic substitutes for NYSE stocks, and, under ordinary circumstances, arbitrage links the prices in these three markets.

The conclusion that the three markets are linked does not dictate that the regulations governing each individual market should be identical. The Commission recognizes that each market appropriately has its own distinctive products, regulations, procedures, and systems of trading. 7/ The speed with which capital moves among these markets and the high degree of pricing correlation among them, however, require that regulations governing each individual market take into account the numerous intricate relationships among the markets and the impact that trading in any one market can have on trading in the others.

A second important conclusion is that new trading mechanisms cause extraordinary peak volume and volatility that at times can overwhelm the capacity of the markets. The overall trading market is institutional. Further, certain institutional strategies increasingly rely upon basket or portfolio trading rather than upon judgments as to the investment value of individual stocks. There is nothing intrinsically undesirable about portfolio trading. For large investors, holding a large portfolio of securities is a means of diversifying investments in order to protect

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6/ In this respect, the Commission's conclusions are similar to those of the Presidential Task Force on Market Mechanisms. *See Report of the Presidential Task Force on Market Mechanisms* ("Task Force Report"), at vi.

7/ *Cf.* Section 11A of the Securities Exchange Act of 1934 ("1934 Act"), which specifically endorses different systems within a national market system.

against market movements in a single security. When portfolios grow to the size where billions of dollars are allocated to the equity market, an individual stock approach may no longer be safe or efficient method of equity investing. As a result many large institutions view the equity market as a single investment. Instead of valuing individual securities, they balance their portfolios among equity, debt instruments, and other broad investment categories using stock indexes as a means of investing in equities. The task of setting relative prices among the individual securities that compose the equity indexes is left to other investors.

In addition, the futures market, because of its lower transaction costs (including lower margins), speedier executions, and at times greater liquidity, has become the market of choice for large institutional investors seeking to reallocate or hedge their stock portfolios. Because large portfolio traders may choose to enter the futures market first, and because the nature of futures trading allows futures prices to change more rapidly than their corresponding equity prices, futures prices often lead equity prices. As a consequence of these factors, price discovery for portfolios of stocks now often occurs in the futures markets, with prices transmitted to the stock market either directly through arbitrage or indirectly through the signals created by spreads between the futures and stock prices.

On October 19 and 20 the amount for portfolio selling was so large, and so far beyond the substantial liquidity that is generally available in the futures and stock markets, that market mechanisms adequate for the vast majority of trading situations failed on a massive scale. The serious liquidity problems that became apparent as traders attempted a rapid rebalance of multi-billion dollar portfolios were exacerbated by information failures that made it difficult for traders to estimate prevailing prices and caused concern over the financial stability of major market participants. The combination of intense selling pressure, market mechanism failures, and lack of information exhausted much of the available liquidity, caused substantial uncertainty, drove down prices, and generated unprecedented volatility in all the linked markets. This unprecedented volatility appears to have been greater than can be accounted for by fundamental economic factors. It clearly signals that our capital markets must improve.

While price volatility that reflects fundamental changes in buying and selling interest is not inherently bad or damaging to the markets, extreme price movements in short periods of time that are induced or exacerbated by structural problems within the markets can have a number of damaging effects. First, extreme price volatility can substantially increase the risk encountered by market makers and may have long term effects on market liquidity. Second, more volatile markets can decrease the ability of broker-dealers to use their capital effectively. To the extent risk of loss increases substantially, firms will be required to maintain greater capital reserves to satisfy both creditors and regulators. Finally, such volatility may make it more difficult for corporations to raise equity capital by decreasing the willingness of the public to invest directly in the stock market.

The two fundamental conclusions -- that a unified market exists and that new trading mechanisms can cause extraordinary peak volume and volatility that overwhelm the capacity of markets -- suggest at least three types of operational reforms and several regulatory changes. The three types of reforms for the operation of the market places include, first, changes to increase the capacity of each of the individual markets to respond to new market structures and trading strategies; second, changes to improve coordination among the markets; and third, changes that may retard, at least during crisis periods, the increased velocity and volume of intermarket and intramarket trading.

The Commission believes that the primary focus should be on expanding the capacity of the markets through operational reforms and coordination measures. The Commission recognizes, however, that even with operational reforms and better coordination, it simply is not realistic in the immediate future to expect sufficient liquidity to exist to satisfy liquidity demands created when a $3 trillion market experiences massive and concentrated selling pressure.

Accordingly, the Commission believes that, as temporary supplements to capacity expanding and coordinating measures, it may be prudent to adopt narrowly tailored measures designed to reduce liquidity demands. The Commission believes that the greater leverage available in the stock futures index market may at times contribute to increased volatility and volume and that, therefore, the futures exchanges should reduce the amount of futures market leverage, at least temporarily, by increasing stock index futures margin for non-floor traders. This temporary increase would give the regulatory agencies time to study whether more permanent reforms might be appropriate. These more permanent reforms might include steps such as emergency increases of margin only for stock index futures selling in a rapidly declining market or direct limits on the pace of institutional sales during a market crisis.

Other regulatory changes also are suggested by the two conclusions of linked markets and increased volume and volatility. These include increased agency authority to deal with market crises and adoption of additional reporting requirements for large trader and program trading transactions. More fundamentally, these conclusions suggest that consideration must be given to changes in supervisory structures so that all equity-related products are regulated through mandated coordinated regulation, if not by one agency.

A third conclusion reached by the Commission is that there are weaknesses in areas such as specialist and market maker performance, capital adequacy, and clearing and settlement that must be remedied. The Commission is recommending improvements in each of these areas.

A fourth Commission conclusion that emerges based on the Staff Study is that the events of October 19 and 20 dramatically confirmed the internationalization of the securities markets. Trading in the U.S. markets clearly affects trading in foreign markets, and vice-versa, although the U.S. more often leads than follows other stock markets. In a sense, the market for United States equities can be viewed as including not only the domestic futures, options, and stock markets, but the major foreign markets as well. However, while this interdependence of the world's markets should be recognized, it should not paralyze efforts at domestic reform. Indeed, reforms to maintain the stability and fairness of U.S. markets may well avoid flight from the domestic markets to foreign markets.

IV. SPECIFIC RECOMMENDATIONS

A. The New York Stock Exchange

(1) Capacity Expanding Measures

The events of October demonstrate the need to expand the capacity of the NYSE to meet the increased liquidity demands created by today's trading strategies and market structures. The Commission believes that the following five measures might help increase the NYSE's capacity.

(a) DOT Enhancements

The NYSE should undertake to increase its capacity by expanding its automated small order routing system, known as the Designated Order Turnaround System ("DOT"). DOT is

the major means of routing orders to the NYSE floor. It is heavily used to facilitate the sale of stock portfolios through program trading. DOT should be expanded not only to avoid printing queues that developed on October 19 and 20, 8/ but also to accommodate block or program trading. 9/

Moreover, the DOT system is a key operational link between futures and stock markets. It should not be an encumbrance on market linkage because of technical or capacity problems. If decisions are made to close DOT to program trading, they should be based solely upon a demonstrated need to uncouple the two markets. 10/ DOT capacity should be expanded so that the system can provide continuing market access to both large and small orders, even in times of market stress. 11/ In any event, the criteria for cutting off the major means of routing orders to the NYSE floor should not be adopted without regulatory review. 12/

8/ See Staff Study at pp. 7-21 - 7-23.

9/ See N. Katzenbach, An Overview of Program Trading and its Impact on Current Market Practices ("Katzenbach Report") (commissioned by the NYSE) (December 21, 1987) at 30. The Commission notes that the NYSE and the other securities markets have increased automation in their markets dramatically over the past 15 years and could not reasonably be expected to predict the extreme peak volumes that occurred in October. Automation enhancements, together with the other measures the Commission is recommending, should help the markets be better prepared operationally for these peaks.

10/ The Commission observes that DOT is not the only means by which larger broker-dealers can route program trading orders to the floor of the NYSE.

11/ The Commission does not suggest under what circumstances, if any, such uncoupling would be desirable.

12/ The NYSE recently implemented a voluntary program under which its members would refrain from using DOT to transact programs if the Dow Jones Industrial Average rises or falls by 75 points. While designed by the NYSE as a voluntary program, this new procedure will have to be submitted to the Commission for review under Section 19(b) of the 1934 Act if it is to become a permanent part of the NYSE rules.

(b) Increased Specialist Capital

It is unlikely that increased levels of specialist capital would alone have prevented the steep price declines that occurred on October 19 and the morning of October 20. It is unrealistic to expect any one group of market participants to have or to commit sufficient capital to retard extraordinary selling pressures in $3 trillion markets. 13/ Nevertheless, the events of October 19 and 20 demonstrate that the financial position of many specialist firms can become critically strained during a major market break. While specialist capital appears sufficient in normal trading situations, the Commission is not confident that specialist capital will remain sufficient if the markets continue at their present volatility levels. Thus, increased specialist capital may be helpful in any future market crisis by averting situations in which specialists reach the limits of their buying power or are in danger of failing. 14/ For these reasons, minimum specialist capital requirements should be increased. Further, specialists who self-clear should be required either to establish committed lines of bank credit or otherwise to satisfy higher capital requirements. 15/

In addition, a private emergency dealer capital fund might be considered. Such a fund could serve as a safety net for the specialist system. 16/ While the details and mechanics of such an approach need careful consideration, the concept merits review.

(c) Improved Specialist Performance Procedures

The performance of most NYSE specialists was satisfactory on October 19, although instances of questionable individual performance did occur. 17/ Performance on October 20, where risk positions were

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13/ As the Staff Study points out, starting the week of October 19, NYSE specialists had buying power of over $2.3 billion of capital. See Staff Study at 4-54.

14/ See Staff Study at 4-58.

15/ The NYSE also should improve its surveillance of specialist capital. See Staff Study at 4-68.

16/ See Staff Study at 4-67.

17/ See Staff Study at 4-6 - 4-29.

exceedingly high, was generally weaker, particularly at the opening. Improved performance of individual specialists' affirmative obligations should result in increased commitments of specialist capital. In order to improve specialist performance the NYSE must more vigorously exercise its authority to reallocate specialists' stocks.

The NYSE currently has two mechanisms to reallocate stocks: (1) disciplinary procedures for violations of the specialist's obligation to maintain fair and orderly markets; and (2) reallocation procedures under NYSE Rule 103A based upon quarterly evaluations of the specialist's performance by floor brokers. The NYSE should not be reluctant to use the disciplinary process 18/ to sanction a specialist in appropriate circumstances for failure to maintain fair and orderly markets. 19/ The Commission believes, however, that a vigorous evaluation program under NYSE Rule 103A is critical to improving NYSE specialist performance. The NYSE needs to continue its efforts to improve its evaluation standards and process by adopting relative performance measures. 20/ In evaluating specialist performance the NYSE should also take into account the impact of the futures markets on stock market volatility, particularly at the opening. 21/

18/ See 1976 NYSE Report of the Committee to Study the Stock Allocation System. The report suggests that disciplinary proceedings may not be the most effective tool to enforce the specialists' affirmative obligations because those obligations are somewhat subjective.

19/ In this connection, the reassignments pursuant to consent decrees of J.P. Morgan and Gould stock to new specialists are encouraging. See Staff Study at 4-28.

20/ See Staff Study at 4-28 - 4-29. The Commission also believes that poor specialist performance should weigh heavily against the specialist in allocation determinations for new or reallocated listings. Id. at 4-29, note 75. The Commission emphasizes, however, that incentives to obtain new listings are not sufficient to ensure improved specialist performance and that the additional deterrence provided by a vigorous reallocation program is critical.

21/ This problem might be ameliorated by coordinated opening procedures. See infra Section III.C.1.

(d) Basket Trading Posts

In addition to directly increasing the capacity of its specialists, the NYSE should consider the creation of posts for trading baskets of stocks. As the Staff Study suggests, the creation of such posts might alter the dynamics of program trading. 22/ While some arbitrage programs would continue to flow directly to the specialists in the individual stocks to maintain pricing efficiency, other institutional program trades could be focused on the basket post where the specialist and the crowd, perhaps supplemented by block positioners, could provide additional liquidity to the system. The existence of a basket trading post might cushion individual stocks from the intraday volatility caused by arbitrage between futures and stocks and nonarbitrage program activity. 23/ The Commission appreciates that there are considerable questions that need to be examined concerning the feasibility and design of basket trading on the NYSE. The Commission recognizes that the ultimate success of this concept depends on the ability of such a trading post to pass a market test in competition with other index-based financial instruments, but it believes that the proposal deserves serious consideration.

(e) Public Dissemination of Program Trading Information

The public dissemination of program trading information might reduce uncertainty about market conditions. 24/ The NYSE and the other self-regulatory organizations should consider including reports of program trades on the consolidated tape as they occur or perhaps as they are routed to the markets.

(2) Short Sale Restrictions

As the Staff Study illustrates, the existing restrictions on the short sale of stocks are ineffective to retard large price declines, particularly where the selling of stock index futures, index substitution and the selling of stock short outside the United States are not similarly restricted. Current short sale regulation should be

reevaluated in light of contemporary market conditions. 25/ The Commission does not believe, however, that it is feasible to impose short sale restrictions directly on the futures markets.

B. The Stock Index Futures Markets

Under the current regulatory scheme, initiatives to improve the operation of the futures markets are for the most part the responsibility of the Commodity Futures Trading Commission ("CFTC") and the relevant contract markets. Nevertheless, the operation of stock index futures markets has a substantial impact on the operation of the stock markets, as dramatically demonstrated during the market break. It is appropriate, therefore, for the Commission to discuss changes to the futures markets that might help improve futures market liquidity and alleviate, to some extent, the transmission of massive selling pressure to the stock markets.

(1) Capacity Expanding Measures

The Commission believes that the creation of block trading procedures, similar to those used in the stock markets, might allow the futures markets to accommodate futures blocks in a more liquid and orderly way. 26/ In the listed stock markets, blocks generally are negotiated upstairs and then crossed on the floor, using specialized procedures to give priority to public limit orders without allowing the crowd or the specialist to interfere unduly with the cross. 27/ The effect of such a procedure is to allow block sales to be accomplished without causing severe price disruptions. Block trading procedures offer significant potential efficiencies for futures trading, and should be examined. If concerns are raised regarding the Commodity Exchange Act's ("CEA") prohibition against prearranged trading, 28/ legislative changes should be considered.

22/ See Staff Study at 3-17 - 3-18. The Katzenbach Report recommends a similar measure. See Katzenbach Report at 29.

23/ See Staff Study at 3-18.

24/ See Staff Study at 3-27 - 3-28.

25/ See Staff Study at 3-24 - 3-26; Katzenbach Report at 17.

26/ The Commission notes that a "sunshine trading" rule proposal by the New York Futures Exchange that would have a similar purpose is pending before the CFTC. See 52 FR 2575 (January 23, 1987).

27/ See NYSE Rule 127.

28/ See, e.g., CEA Section 4c, 7 U.S.C. Section 6c; 17 CFR 155.2(f).

(2) Reducing Liquidity Demands

As discussed at the outset, the Staff Study, as well as the Task Force Report, suggest that new trading strategies and market structures are creating greater volume and velocity of trading and imposing greater liquidity demands on the futures and stock market places. Until the capacity of these markets expands sufficiently, measures to reduce sudden peak demands placed on the markets by new trading strategies and market structures should be considered.

(a) Margin Requirements

Futures products enjoy greater leverage in part because they are cash-settled and have lower margins. 29/ This greater leverage permits major long futures positions to be established with relatively small initial capital. This greater futures leverage also permits the rapid liquidation of large positions in the futures market, or at least encourages the perception that such rapid liquidations may be possible.

The extent to which high futures market leverage contributed to the market break is uncertain. Nevertheless, there is sufficient concern about high futures leverage, and, as a corollary, serious overestimates of the degree of liquidity in the futures markets, to warrant temporary increases by the futures exchanges in initial margin levels for stock index futures for market participants, other than non-floor traders (called futures locals). 30/ A temporary margin increase for a specific class of traders could be effected by agreement of the futures exchanges.

A temporary increase would permit additional opportunity to review the effects of different margin levels in the stock and futures markets. 31/ It also would provide

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29/ *See* Staff Study at 3-19 - 3-20.

30/ A "futures local" is the equivalent of a market maker or floor trader on an Exchange floor. The Commission notes that the options exchanges have doubled stock index options margins since October 19. *See* Securities Exchange Act Release No. 25018 (November 2, 1987) 52 FR 42751 (order approving American Stock Exchange, Chicago Board Options Exchange, Pacific Stock Exchange, and Philadelphia Stock Exchange rule changes).

31/ Because the underlying concern is leverage, the leveraging effects of cash-settlement and the costs and benefits of requiring physical settlement also

an opportunity to evaluate any resulting loss of futures market liquidity during periods of normal activity. In addition, the costs or benefits of more limited margin changes -- such as increasing initial margin requirements in times of extreme downward price volatility for futures *sales* only -- could be considered.

In recommending temporary margin increases for futures trading the Commission is not suggesting that the level of initial margin on stock index futures be raised to the same level as initial regulatory margin on equities. The Commission does not believe that equivalent margins are necessary. The mark-to-market requirements for futures dampen leverage by requiring future traders to have cash available to meet margin calls during periods of high volatility. Because of this existing dampening effect, margin levels on stock index futures for non-floor traders should be increased by the futures exchanges only to make them comparable to the lowest levels available in the stock market, levels which are approximately 20-25%. 32/

The Commission recognizes that higher margin requirements will increase the cost of futures trading. Moreover, selling by futures locals does not appear to have been a significant factor in the market break. Thus, the Commission is not recommending that initial margin increases apply to futures locals. Since lower margin requirements for market makers enhance market liquidity, the margins for locals should continue to be based upon levels designed by the futures exchanges to protect the clearing agencies from default.

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should be evaluated. *See* Staff Study at 3-19 - 3-20.

32/ Regulation T and Regulation U of the Federal Reserve Board provide that specialists on the floor of an exchange and over-the-counter market makers may obtain loans collateralized by their specialty or market-making securities on a "good faith" basis, without regard to the normal margin requirements. The loans may be obtained either from another broker-dealer or from a bank. The banks and broker-dealers usually require margin in the 20-25% range as collateral for these loans. At current index levels (@ 257), the value of one S&P 500 stock index futures contract is $128,500, and 20% initial margin would be $25,700. The current margin requirement for this contract is $15,000 ($10,000 for hedgers).

(b) Restrictions on Large Rapid Liquidations

Another means to reduce temporary peak demands on liquidity that the market currently cannot absorb would rely on procedures analogous to the bracketing procedure employed by the Chicago Mercantile Exchange ("CME") during the week of October 19. In situations of particular market stress, the CME "began to limit requests by major market participants for higher levels of position exemptions. . . . [T]his action allowed the CME to examine each request to execute a substantial volume against the ability of the market to absorb such volume at one time without dramatically and perhaps artificially affecting prices." 33/ In addition, "[t]he CME also required larger hedgers to spread their sell orders out across time brackets, thus reducing the potential concentration of these orders. 34/

This approach may deserve consideration if applied equitably across all capital markets and very carefully restricted so that it applies only in rare situations when cooperative behavior by potential sellers, to avoid large, clustered sell orders that rapidly exhaust liquidity, is in the best interest of the markets and of those traders as a group. Such bracketing procedures could be fashioned to affect only large hedgers and only after tangible indications that liquidity is relatively scarce. Significantly, unlike price limits on trading halts, they would permit continuing liquidations, but in a more orderly manner. Also, as noted, they would not limit small transactions.

In addition to its similarity in concept with the "bracket rationing" adopted by the Chicago Mercantile Exchange during the market break, such an approach would be similar to the exercise limits that currently apply in the

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33/ Miller, M.H., J.D. Hawkes, Jr., B. Malkiel, M. Scholes, Preliminary Report of the Committee of Inquiry Appointed to the Chicago Mercantile Exchange to Examine the Events Surrounding October 19, 1987, Dec. 22, 1987, at 52-53.

34/ The CME concluded that the "'bracket rationing' effect of tightening position limits on an emergency basis appeared to have an ameliorating impact in allowing the CME to regulate the flow of large sell orders." *Id.* at 53.

options markets. 35/ Reducing the ability of large institutions to liquidate large positions over short periods of time would discourage portfolio insurers and other large traders from assuming that large positions can quickly be revised at low cost. Thus, it would deflate "illusions of liquidity" 36/ and could reduce liquidity demands. Requiring a more orderly liquidation of positions may also contribute generally to the perceived orderliness of markets.

On the other hand, such a restriction would not address rapid selling by a wide group of institutions none of which singly might be selling enough to trigger the restriction. The Commission believes the costs and benefits of this suggestion for spreading out liquidation of large hedging positions merit careful review.

(3) Customer Protection

The market relationships dramatically revealed during the market break demonstrate the need for common protections in these markets against "frontrunning." Frontrunning generally involves trading a stock, option, or future while in possession of non-public information regarding an imminent block transaction that is likely to affect significantly the price of the stock, option, or future. 37/ The securities exchanges expressly prohibit frontrunning. 38/ The futures markets do not have rules directly prohibiting frontrunning, although the Commission understands that the CFTC and futures markets believe that the CEA and exchange rules prohibit frontrunning in the futures markets. 39/ To prevent firms trading against the interest of their customers, this prohibition should be made express, strengthened if necessary, and effectively enforced.

35/ Options exercise limits restrict the number of options contracts that may be exercised over a five day period. *See*, *e.g.*, Chicago Board Options Exchange Rule 4.12.

36/ *See* Task Force Report at 57.

37/ As a matter of policy, the Commission does not comment on the existence or absence of investigations.

38/ *See*, *e.g.*, CBOE Circular No. 23, revised July 1987; and Staff Study at 3-30.

39/ *See* Staff Study at 3-31.

C. Intermarket Coordination

(1) Coordinated Openings and Closings

The events of October suggest the need to consider greater coordination between the stock and futures markets to deal with disparities and instability, particularly at openings and closings.

During the market break, pricing disparities and instability were particularly acute at the openings. With the futures markets contributing to price discovery, this point of stress is likely to remain even if measures to expand markets and limit large liquidations are put in place. Allowing futures to open before stocks 40/ can put great stress on specialists, as shown by the openings on October 19 and 20. If index futures open at a large discount to the opening cash index prices, 41/ a specialist in an individual stock is unlikely to absorb imbalances aggressively because the discount implies that prices of stocks will go down. 42/ The discount may also exacerbate any sell pressure otherwise existing in the stock market.

To the extent that non-simultaneous openings are determined to be a problem, one remedy might be to delay the opening of index futures until a certain percentage of the underlying stocks can be opened. Such an approach could be supported on the rationale that both markets should open for trading simultaneously. The futures markets should not trade an index until that index is also effectively trading in its cash amount. There are conflicting considerations involved in the proposal, however, that must be balanced. It has been argued, for example, that delayed index openings prevent futures from playing a price discovery function. Accordingly, the Commission believes that the issue of delayed openings merits further evaluation before recommendations can be made.

40/ One stock index futures contract, the Chicago Board of Trade's Major Market Index contract, opens 15 minutes before the NYSE. In addition, in times of market stress, the futures will open before stocks are opened in the specialist system because stock index futures open immediately without price stabilization efforts.

41/ These prices will be based upon the previous day's closing prices and the prices of stocks that open quickly.

42/ When there are large discounts, arbitrageurs usually, will buy index futures and sell baskets of stocks comprising the index. *See* Staff Study at 1-4 - 1-5.

Similarly, measures to coordinate or impose market closings also require further consideration. Authority already exists in both the stock and futures exchanges to close the markets if conditions warrant. Stock exchanges also have power to close trading on individual stocks if conditions warrant. These powers should be retained. Additionally, halting trading on futures or stock markets temporarily if a certain number of stocks are closed, or closing both markets temporarily if a market-wide price or volatility index reaches preset levels, may increase information flows, alleviate credit concerns, reduce panic, and provide time for contra-interest to enter the market. Such actions, however, could exacerbate uncertainty, cause a rush to sell in anticipation of the halt, and limit the ability of investors and traders to eliminate risk by closing out positions. Thus, the effects of imposing individual or coordinated market closings need further review before recommendations can be made. 43/

(2) Coordinated Credit, Clearing, and Settlement

The Commission believes that a more coordinated credit, clearing, and settlement system across markets would be beneficial. 44/ Such a system would decrease uncertainty about total risk exposures of participants in the stock, options, and futures markets, and would facilitate the more efficient flow of credit between markets, thus improving liquidity. In particular, the SEC and CFTC, in conjunction with the stock, options, and futures clearing corporations, should immediately develop measures to coordinate credit, clearing, and settlement for market professionals involved in securities, options, and futures market activity. While there are practical obstacles that need to be resolved, the benefits are substantial, and progress on such initiatives should have a very high priority.

43/ For the reasons discussed below, the Commission does not believe price limits, which close trading for the day after a certain price is reached, are advisable for stocks, either individually or marketwide.

44/ *See* Task Force Report at 64.

D. Over-the-Counter Markets 45/

During the week of the market break, the prevalence of unreliable quotations, delayed transaction reports, reduced market maker participation, and increased manual order handling, coupled with greater telephone inquiries, undermined the liquidity and orderliness of the over-the-counter ("OTC") market.

The OTC market suffered from a combination of extreme downward volatility and unusually high share volume. An extraordinarily high number of locked and crossed markets disabled the automated small order execution systems operated by the National Association of Securities Dealers ("NASD") and by individual market makers, forcing market makers to execute small transactions manually. Because of the difficulty in reaching other market makers by telephone, customer orders often were not executed in a timely manner, not executed at all, or executed at prices that reflected only a securities firm's best estimate of the prevailing market. In addition, market making was mixed, with some firms providing liquidity and others remaining relatively inactive. 46/

The NASD has responded to problems encountered during the market break with a number of proposals. These include raising the penalty for unexcused withdrawals by market makers from NASDAQ; requiring all NASDAQ market makers to participate in its Small Order Execution System ("SOES"); enabling SOES to execute trades in an OTC/National Market System Security (OTC/NMS) when quotes are locked or crossed; and establishing an Order Confirmation Transaction service that will permit firms to access market makers over the computer without voice contact. 47/

While these proposals demonstrate a willingness by the NASD to respond to problems that occurred during the market break, there are additional areas that merit attention. First, the NASD should determine whether market makers

complied with the NASD's rules during the market break. Second, in light of the large number of transactions reported out-of-sequence by particular firms, the NASD should institute procedures to improve firms' compliance with transaction reporting rules. Third, the NASD should consider requiring market makers to quote sizes that more accurately reflect the amount they are willing to buy or sell. Fourth, the NASD should consider additional steps to ensure that market makers can execute orders electronically against each other's quotations during high volume periods.

E. American Stock Exchange

Although individual specialist performance was mixed, there was a general decline in overall specialist performance on the American Stock Exchange ("Amex") for both October 19 and 20, particularly on October 20. In individual instances, specialists failed to open stocks for substantial periods of time. The Amex should evaluate whether Amex specialists met their obligations to maintain, to the extent practicable, a fair and orderly market, and reallocate stocks where appropriate. Amex should examine carefully specialist performance in those many stocks that had delayed openings, substantial trading halts, or that never opened on October 19 and 20. Recommendations concerning increased capital requirements for specialists, discussed earlier with respect to the NYSE, also apply to the the Amex market.

F. Regional Stock Exchanges

Most specialists on the regional exchanges did not assume large positions on October 19 and 20 and many closed those days with net short positions. In fact, the data indicate that many specialists sold more than they bought on October 19th and 20th. Although regional specialists are less well capitalized than primary market specialists and generally take positions only to the extent that they can be laid off on the primary market, the Staff Study raises questions about the regional specialists' ability to supplement effectively the primary markets in executing either small orders or block transactions in times of market stress. Accordingly, the regional exchanges should examine carefully their specialists' capacity to handle increased order flow and to supplement the role of the primary market specialists during times of market stress. 48/

45/ To comprehend fully the Commission's recommendations, particularly in Sections D through J, it is helpful to refer to the related sections in the Staff Study.

46/ See Staff Study at 9-19 - 9-24.

47/ See NASD Notice to Members 87-77 (November 20, 1987). The Order Confirmation Transaction proposal was approved on a temporary basis in Securities Exchange Act Release No. 25263 (January 11, 1988) 53 FR 1430.

48/ The Commission also is recommending improvements to the Intermarket Trading System ("ITS") that should help improve regional specialists performance.

The Midwest Stock Exchange ("MSE"), Pacific Stock Exchange (PSE), and Philadelphia Stock Exchange ("Phlx") also should undertake to increase the capacity of their small order routing and execution systems. The delays and problems encountered during the week of October 19 with these systems highlight the critical need for the exchanges to implement planned enhancements quickly so they can better handle volume surges in the future. Moreover, the PSE and Phlx should consider deferring the addition of new firms until system capacity has been increased. Finally, there should be better coordination among regional markets and with their member firms when problems and delays arise.

G. Intermarket Trading System

The Intermarket Trading System ("ITS") is a communication system that links the seven major stock exchanges and the NASD. On October 19 and 20, substantial delays occurred in routing orders through ITS. Analysis of ITS data regarding expirations of commitments to trade suggests that ITS operational difficulties caused an unusually large number of commitments to trade on the NYSE to expire on October 19 and 20. ITS problems also caused a similar increase in expirations at the regional exchanges during the market break. In addition, ITS suffered from the failure of the ITS plan to provide for a pre-opening notification routine after trading imbalance halts, as well as a general lack of communication among the participating exchanges. The Commission believes that modifications in the exchanges' order routing and support systems, changes in trading halt procedures for imbalances, and improved communications among exchanges should be implemented in order to enhance ITS performance during periods of high volume.

H. Options Exchanges

The options exchanges experienced serious problems throughout the week of October 19 due to extreme volatility in the market for the underlying securities, the periodic absence of useful information concerning the equity and futures markets, and market makers' difficulty in hedging their options positions. The impact of these factors was reflected in the numerous and protracted trading halts; in the fact that prices, or "premiums," charged for option contracts, particularly put contracts, were inconsistent, highly variable, and often unrelated to price movements in the underlying index; and in the unwillingness of some options market makers to foster liquidity by trading on a continuous basis. In particular, the options markets did not provide an effective, continuous market for the most

actively traded index options classes at certain times on October 19 and for virtually all of October 20. Accordingly, the Commission believes there are a number of areas that require review by the options exchanges.

First, the exchanges should reconsider all the effects of permitting options on indexes of securities to open prior to the opening of some percentage of component securities in the underlying market and to continue trading for a certain time even though underlying component securities are not trading. Second, the options exchanges, particularly the Chicago Board Options Exchange ("CBOE"), should examine methods to speed up opening rotations. Index option opening rotations were excessively long on October 20, limiting the ability of options customers to receive timely executions. These delays contributed to higher premiums in some options series. Third, the options exchanges and market information vendors should develop a plan to reduce proliferation of options series or to delist options series from vendor quotation services in the event that vendor data base capacity threatens to be outstripped. Fourth, options markets using small order execution systems should revisit their rules governing market maker participation in these systems. Fifth, options exchanges should closely examine the performance of index options market makers, particularly on October 20, to determine whether they met their obligations to maintain fair and orderly markets to the extent practicable.

I. Clearance and Settlement

During October 1987, clearing agencies, broker-dealers, and securities markets cooperated successfully to compare, clear, and settle unprecedented sustained daily trading volume. Although the volume placed tremendous strain on personnel and systems, approximately 95% of the trading volume was cleared and settled within routine time frames. Volume and record price volatility also dramatically increased the financial risk to clearing agencies and their members. Although some losses were suffered, clearing agency safeguards were effective in preventing significant or widespread losses.

The record volume and volatility suggest, however, the need for improvements in two primary aspects of the clearance and settlement process: post-execution trade processing; and clearing agency safeguards against member default.

The NYSE, Amex, and NASD should consider accelerating efforts to compare all trades on the trade date. Currently, over 50% of share volume is compared through two-sided traded input that results in compared trades several days or longer after the trade date. The October 1987 experience indicates that the current two-sided comparison process cannot be completed fully on a timely basis when sustained daily trading volume becomes extremely high. Automated clearing and settlement systems should be expanded to facilitate comparison at or near the time of trade execution.

Individual clearing agencies also should consider a variety of enhancements to their risk management systems to reflect increased risks resulting from increased price volatility and trading volume. Those considerations should include enhanced member monitoring systems to enable clearing agencies to obtain better and more up-to-date information about members' financial strength, activity in other markets, and customer activity. Clearing agencies also should consider whether risks posed by individual members require increased capital requirements or the deposit of additional assets with the clearing agency.

Options clearing systems and market participants also should reexamine safeguards and consider improvements. As demonstrated in October, equity price volatility can generate geometric increases in options price volatility. The Options Clearing Corporation ("OCC") should enhance member monitoring techniques in order to provide better early warning of risks and it should increase measures to guard against those risks when they appear. Additionally, basic volatility assumptions and margin formulas should be reassessed. When OCC margin is insufficient to cover intra-day volatility, OCC resorts to variation margin calls to protect itself. Events in October suggest that OCC should reassess the manner and timing of variation margin calls to determine whether it can obtain earlier warning of and protection from potential member insolvency, especially for volatility that occurs late in the trading day near the close of banking hours. Finally, as noted earlier, initiatives to achieve a more coordinated credit, clearing, and settlement system across markets should have a very high priority. 49/

49/ Attention to clearing problems in the futures markets also should have a high priority. See Task Force Report and CFTC Staff Follow-up Report on Financial Oversight of Stock Index Futures Markets During October 1987 (January 6, 1988).

J. Capital Adequacy

The Staff Study analyzed the effects of the market break on the capital adequacy of exchange specialists, upstairs firms (those conducting a public business and/or trading for their own accounts) and options firms. The Study's findings and the Commission's recommendations with respect to NYSE specialists have been set forth above. 50/

In general, the largest "upstairs firms" suffered substantial losses in October as a direct result of the market crash. However, none fell below the net capital early warning levels. Of the approximately 6,700 upstairs firms, about 60 were at some time in violation of the net capital rule. Of that number, only three carried customer accounts and only one of those had to be liquidated under the Securities Investor Protection Act.

In light of the increased volatility in the market, the Commission intends to reexamine the minimum net capital required of certain types of broker-dealers as well as the level and structure of haircuts for equity securities and futures. In addition, the Commission plans to review financial activities conducted in affiliates of broker-dealers to determine whether these financial activities create undue risk exposure for the broker-dealers and the financial markets generally.

Some options market makers also experienced substantial losses as a result of the market break. These losses created exposure for their clearing firms. Some clearing firms experienced severe liquidity problems. A number of factors contributed to the liquidity problems, including: (1) intra-day variation margin calls; (2) difficulties in financing stock and options positions through banks; (3) problems with returned stock loans; and (4) market makers' withdrawals of excess equities from their accounts.

To increase capital adequacy the Commission is recommending that certain areas be reviewed. Specifically, the Commission will examine regulatory requirements regarding the amount of equity an options market maker should have in its account and the amount of market maker business a clearing firm should carry without additional resources.

50/ See Staff Study Chapter 4; testimony, supra at Section IV.A.1.b.

K. Reporting Requirements

The concentrated institutional selling that occurred on October 19 and 20 indicates a need for more timely reporting of large trader securities activity. 51/ Currently, the Commission and the securities self-regulatory organizations routinely obtain information that identifies the broker-dealers involved either as principal or agent in each trade; they receive information identifying the actual customers, however, only upon request. To perform their surveillance and oversight functions more effectively, the Commission and the self-regulatory organizations must be able to identify actual participants on a more timely basis. Reports identifying large trader activity also will enhance the ability of the Commission and the self-regulatory organizations to identify potentially disruptive market conditions as they develop. These reports should contain indications of whether the trading was part of index arbitrage, index substitution, portfolio insurance, or other program trading strategies. 52/

L. Regulatory Authority and Structure

(1) Emergency Authority

The Commission believes that it needs authority, in addition to that provided by Section 12(k) of the 1934 Act, 53/ to take a variety of steps in a market emergency. The Commission contemplates that the SROs will remain the primary decision makers in an emergency. The SROs have first hand knowledge of the conditions in their markets and can be expected to act responsibly. Nonetheless, in light of new trading strategies and market structures, the Commission should have the authority, roughly equivalent to the CFTC's current emergency authority, to act in an emergency to implement a variety of measures, including margin changes, delayed openings, early market closings, and temporary trading halts. 54/

The Commission already has begun discussions concerning a coordinated emergency plan with the CFTC and the Federal Reserve Board. While ultimately the Commission believes that the solution in this area, as in other intermarket areas, may be more formal regulatory consolidation, 55/ in the near term the expansion of the SEC's emergency powers and continued efforts at interagency planning are necessary short-term objectives.

(2) Regulatory Coordination and Consolidation

(a) Background — SEC/CFTC Accord

In December 1981, the SEC and the CFTC announced the SEC/CFTC Jurisdictional Accord ("Accord"). The Accord resolved certain jurisdictional issues raised by the introduction of new derivative financial products into the marketplace. The Accord, which was enacted into law in 1982 and 1983, allocated between the two agencies jurisdiction over derivative financial instruments such as options, financial futures, and options on financial futures.

A major goal of the Accord was to avoid the possibility that competing new options and futures products could be subject to significantly different regulation. In addition, it appeared possible that CFTC approval of the stock index futures proposals that were before it would introduce products into the marketplace that could, by avoiding SEC regulation, lead to possible manipulation of stock prices.

Another critical area of the Accord involved the question of jurisdiction over futures on indexes of corporate securities. The SEC was concerned that futures

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51/ The CFTC currently has a large trader reporting system. See Commodity Exchange Act Section 4(i), 7 U.S.C. 6i, and 17 CFR 18.04.

52/ In large part because of the lack of customer identification in current reporting procedures, the Commission staff encountered enormous difficulties obtaining the data necessary to reconstruct trading for October 19 and 20. The Commission staff experienced similar problems in its study of trading on September 11 and 12, 1986.

53/ 15 U.S.C. 78l. Among other things, Section 12(k) authorizes the Commission, with the President's approval, to suspend trading on all exchanges or over-the-counter in non-exempt securities for up to 90 days under certain circumstances.

54/ See Section 8(a)(9) of the CEA, 7 U.S.C. 12a(9). Section 8(a)(9) empowers the CFTC to directly contact markets to take appropriate action to maintain or restore orderly trading, including increasing margin, whenever the CFTC believes an emergency exists. An emergency is defined generally as a situation in which market disturbances prevent the market from accurately reflecting supply and demand.

55/ See Section IV.L.2.b., *infra*.

indexes, particularly narrow-based indexes, could be used to evade the SEC's regulatory scheme and, in particular, that trading in them could result in price manipulation and could provide an incentive for manipulation in the underlying securities. The Accord legislation attempted to address the SEC's concerns by providing that the CFTC would authorize trading in futures, or options on futures, only on indexes of corporate debt or equity securities that are (1) settled in cash, (2) not readily susceptible to manipulation, and (3) broad-based and widely published.

In addition, the Accord legislation gave the SEC a significant role with respect to the review of applications for the designation of contract markets for the trading of index futures. The CFTC may not approve an application received after December 9, 1982 if the SEC determines that the application fails to meet the minimum statutory qualifications just mentioned.

Thus, the Accord criteria for stock index futures have the limited purposes of addressing manipulative concerns and preventing evasion of the regulatory structure applicable to the securities markets.

(b) Implications of Market Changes Since 1982 56/

The stock, options, and futures markets have changed fundamentally since 1982 when the Accord was signed. The markets are linked to a degree that was not anticipated at the time of the Accord. At the time of the Accord, it also was not anticipated that the stock index futures markets would have the dominant price discovery role. In light of these fundamentally changed circumstances, the current regulatory scheme needs change. Neither as a matter of regulatory efficiency nor as a matter of public confidence does it make sense to maintain separate authority over the stock index futures and the stock markets. Thus, we agree with the Task Force and Katzenbach Reports that regulatory authority over these markets should be more coordinated or perhaps united. 57/

56/ Commissioners Grundfest and Fleischman do not join in parts IV.L.2.b and d. of the Commission's testimony to the extent they suggest that improved coordination is not the appropriate approach to intermarket regulatory issues and that the Commission alone possesses adequate and responsible expertise.

57/ See Task Force Report at 59; Katzenbach Report at 31.

The Commission recognizes that futures products and stocks trade in different systems and that the regulations governing these systems cannot be identical. Nevertheless, as the Staff Study demonstrates, the primary use of stock index futures by most institutions is to execute transactions in which futures are used as a direct substitute for buying or selling a basket of stocks. 58/ When a derivative stock product trades in markets that are linked with and have substantial impact upon the markets for stocks, the operation and rationale for the derivative product market itself provides a basis for regulation that is coordinated with the underlying equity market. 59/

(c) Coordination

As a first step, the agencies must increase their coordination of regulation over these united markets. The Commission and the CFTC have already agreed to initiate and have initiated steps to coordinate regulation of the stock, options, and futures markets, and to coordinate credit considerations relevant to those markets with the Federal Reserve Board. This coordination should continue on an expanded basis. Specifically, the Commission urges and will plan to initiate three steps which should take place immediately.

First, the SROs for the stock, options, and securities markets should coordinate in order to initiate joint plans to meet volatility problems. Their meetings should be attended by staff members of both the Commission and the CFTC.

Second, the Commission and the CFTC should direct their staffs to meet in order to review the various regulatory proposals made by the Commission, the CFTC, the Presidential

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58/ As the Commission's regulation of standardized stock options markets since 1973 proves, the fact that futures are different from stocks (or options) does not mean that it would be more efficient to continue to develop separate expertise in these products through separate regulators. Moreover, as has been proved by the SEC's regulation of both the over-the-counter and exchange markets since 1938, differences in trading systems are not an obstacle to effective consolidated regulation.

59/ The markets for stock, stock index options and stock index futures are so linked that the regulation of all three must take into account the capital formation purposes of our national equity markets.

Task Force, and others which affect the markets supervised by them. The Chairman of the Commission and the Acting Chairman of the CFTC should review the results of these meetings, and take steps necessary to implement the recommendations and, where necessary, to resolve differences.

Third, consultation by the Commission and the CFTC with the Federal Reserve Board and the Federal Reserve Banks of New York and Chicago regarding credit, capital, and liquidity matters should continue.

(d) Consolidation

The increased linkage of stock index futures and stock markets indicates that greater interagency coordination may not be enough and that more formal regulatory consolidation is necessary. The Commission believes that attempted coordination of regulation with respect to equity-related products may produce irreconcilable disagreements and that measures to resolve disagreements between the Commission and the CFTC must be created by new legislation.

The Commission does not believe that it is desirable to give the Federal Reserve Board jurisdiction over significant intermarket matters. The Federal Reserve Board lacks the necessary expertise regarding both equity and futures markets. Giving it jurisdiction over intermarket matters would require the FRB to duplicate the SEC's existing expertise regarding these markets. 60/ A more efficient and practical intermediate step would be to give the SEC, the agency with expertise and direct responsibility for the equity markets, final regulatory authority for equity-related products, with respect to critical "intermarket" decisions such as coordinated trading halts, anti-manipulative and frontrunning rules, and other matters. In addition, the Commission's present authority to review proposed index futures contracts to ensure that they are not susceptible to manipulative activity should be expanded to include review of both new and existing contracts and to permit consideration of the impact of these products on the orderly operation of the stock market.

The Commission believes that limited power vested in the SEC to resolve agency disagreements may be adequate. However, the October market events dramatically reaffirm

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60/ The FRB clearly does have the necessary expertise for margin regulation, and would be an appropriate agency to have authority over margin for all equity-related products, including stock index futures.

that the stock index futures markets have become part of a single larger market that is currently subject to SEC and CFTC regulation. These events suggest that the most logical and efficient result would be the regulation of these markets by the SEC. The Commission currently has the responsibility and expertise regarding the underlying equity markets and, through its cooperation with the CFTC, its review of stock index futures under the Accord, and its various studies of index arbitrage and portfolio insurance trading, has acquired substantial expertise in futures markets. It is the agency most capable of exercising overall regulatory power.

(3) International Coordination

The October market break provided dramatic confirmation of the internationalization of markets, although at the same time it emphasized the continuing leadership of the U.S. markets.

The Commission, for several years, has actively pursued greater cooperation and coordination with foreign regulators in a variety of ways, including negotiation of bilateral enforcement agreements and participation in multilateral forums such as the International Organization of Securities Commissions. The Commission believes that the October events underscore the need to continue and indeed to intensify these efforts. 61/

In addition, the inter-relationship of the world's securities markets underlines the importance of enhancing the safety and efficiency of those markets. The Commission intends to respond to these developments by working with other regulators to develop trading, clearance and settlement linkages, international trade and quote mechanisms, and adequate financial oversight systems.

V. SUGGESTIONS NOT PURSUED

Numerous other ideas for reforming these markets have surfaced since October. The Commission discusses in this section two of the more substantive proposals that it has determined not to pursue at this time -- price limits on stocks and position limits.

61/ In this connection, we note that Senator Riegle has made similar recommendations.

A. Price Limits on Stocks

The Commission believes that individual stock price limits are inconsistent with a continuous auction market concept. Such limits may deprive small and large investors of the ability to liquidate positions precisely when these investors need to do so. Moreover, individual limits may be overbroad as a measure to address marketwide crises because they result in trading halts in individual stocks even in the absence of marketwide problems. The NYSE's existing procedures for order imbalances are generally adequate to address isolated liquidity problems in individual stocks.

The Commission also believes that mechanistic marketwide price limits, under which the entire stock market would close for the day if some market-wide measure exceeds certain pre-set limits, should not be pursued at this time. The limits might be set so high as to be ineffective, or so low as to be unnecessarily disruptive. Moreover, the existence of such limits, rather than calming markets as some have suggested, 62/ might induce panic and accelerate trading as the limits approach. The Commission believes that particularized judgments, based on the actual conditions in the market, are a preferable way to deal with the complicated issues of closing the stock market. The markets should, however, be assured that trading will not be halted absent truly extraordinary circumstances that warrant such intervention.

B. Position Limits

While the Commission believes that the aggregation of position limits for broad based stock index options and futures might enhance the anti-manipulation function of these limits, it does not believe that consideration of decreasing limits is necessary at this time to address increased volatility in light of the other measures recommended. Position limits should be considered as an alternative means to reduce excessive volatility only if these other measures prove too difficult to design or implement.

VI. CONCLUSION

The Report on the October 1987 Market Break prepared by the Commission's Division of Market Regulation presents a comprehensive factual review of the functioning of the nation's securities markets. The Report and the recommendations contained in it have been examined by the Securities and Exchange Commission, which in turn has made its recommendations regarding needed regulatory changes. Although its conclusions are subject to revision upon further review, the Commission strongly believes that the nation's securities markets must be allowed to evolve if they are to remain healthy. Although both the Staff Study and the Commission's recommendations suggest that changes are needed, the most salient point that has emerged is that our securities markets withstood the October 1987 pressures. The Commission believes that it can best fulfill its role as regulator of the securities markets by cooperating with Congress, the Administration, the CFTC, the Federal Reserve Board, and the markets themselves. In such a cooperative environment, our securities markets can continue as the best and strongest in the world.

62/ See the Task Force Report at 66.

APPENDIX A

INTRODUCTION AND EXECUTIVE SUMMARY

Introduction

During October 1987, the nation's securities markets experienced an extraordinary surge of volume and price volatility. The most widely followed indicator of the U.S. stock market's movements, the Dow Jones Industrial Average ("DJIA") ind[illegible] 30 New York Stock Exchange ("NYSE") stocks, had reached an intra-day high of 2746.65 on August 27, 1987. On October 2, the DJIA closed at 2640.99. During the week of October 5, the index declined by 158.78 points; during the week of October 12, by 235.47 points. On October 19, the DJIA declined 508.32 points, and by its low point mid-day on October 20 it had declined to 1708.70, or over 1,000 points (37%) below its August 25 high. Even with its erratic but substantial recovery over the next few trading sessions, by October 30, the DJIA stood at 1,994, down over 26% from its August high. Broader indexes also declined for the month of October. For example, the Standard & Poor's ("S&P") index of 500 stocks ("S&P 500") declined 21.8%, the composite indexes for the nation's three principal securities markets, the NYSE, American Stock Exchange ("Amex"), and the National Association of Securities Dealers ("NASD") Automated Quotations ("NASDAQ") system for over-the-counter ("OTC") stock trading, experienced declines in October of 21.9%, 27%, and 27.2%, respectively.

Given the extraordinary events of late October, the Chairman of the Securities and Exchange Commission ("SEC" or "Commission") instructed the Commission's Division of Market Regulation ("Division") to conduct a comprehensive study of the causes, effects, and regulatory ramifications of the market break. While this study was conducted in conjunction with similar reviews by others, most notably those of the Presidential Task Force on Market Mechanisms and the Commodity Futures Trading Commission ("CFTC"), the Division's review is designed to provide an independent factual basis to enable the Commission to determine the most appropriate regulatory responses to ensure the soundness of the nation's securities markets and the protection of investors.

Although the staff of the Division primarily was responsible for preparation of the Report, valuable assistance was provided by the Office of Consumer Affairs, the Office of the Chief Economist, the Directorate of Policy and Economic Analysis and the Divisions of Corporation Finance and Investment Management. The major purpose of the Report was to analyze what happened during the October 1987 market break, rather than provide final "answers" to what should be done based on those findings. To the extent the Report suggests items for further analysis and discussion, it bears repeating that these suggestions are solely the responsibility of the Division and do not necessarily reflect the views of the Commission.

Before summarizing the individual Chapters, it is important to put the Report's objectives in focus. As a threshold matter, the Report does not answer the question of why in October of 1987 the value of common stocks was reduced by approximately 30%. We may never know what precise combination of investor psychology, economic developments and trading technologies caused the events of October. Instead, the Report attempts to reconstruct the trading activity during the October market break and analyze how the trading systems for stock and its derivatives (i.e., options and futures) may have contributed to the rapidity and depth of the market decline.

In conducting our analysis, we have adopted the fundamental assumption that extreme price volatility, such as occurred during the market break, is undesirable. We recognize that in one sense volatility is a neutral phenomenon: a measure of how quickly prices react to new information. Moreover, during periods of increased economic uncertainty it is not surprising that increased volatility occurs. Nevertheless, when price swings reach extreme levels, they can have a number of adverse consequences. First, such volatility increases marketmaking risks and requires market intermediaries to charge more for their liquidity services, thereby reducing the liquidity of the market as a whole. Second, if such volatility persists, securities firms are less able to use their available capital efficiently because of the need to reserve a larger percentage of cash-equivalent investments in order to reassure lenders and regulators. Third, greater volatility can reduce investor confidence in investing in stocks. As a result of these effects, we believe substantially increased price volatility could, in the long run, impact the ability of U.S. corporations to raise capital efficiently through the sale of equity securities.

Executive Summary

The following provides an overview of the subject areas covered in each of the chapters of the Report and summarizes the Division's findings.

Chapter One -- Background and Description of Trading Strategies

This chapter provides background information necessary to understand the market reconstructions discussed in the main body of the Report. The background information covers four areas. First, a description is provided of the various types of index-related trading strategies used during the market break: asset re-allocation and hedging, portfolio insurance, and index arbitrage (cash arbitrage and index substitution). Second, the use of automated stock order-routing systems for the above trading strategies, as well as for other forms of trading "baskets" of stocks, is discussed. Third, a summary is provided of the findings from earlier Commission studies of the impact of derivative index products on the securities markets. And fourth, the chapter outlines the scope of the Division's Report and the methodology employed in the staff's reconstruction of the markets during the market break.

Chapter Two -- Chronology of Trading During October Market Break

Chapter Two provides an overview of trading during the key days of the October market break, including an overall breakdown of trading into institutional, proprietary, and retail components, and a description of the interactions among the various types of index-related trading on the securities and index futures markets. More detailed chronologies of trading on these days are provided in Appendix A to the Report. Chapter Two also discusses significant Commission regulatory actions during the market break.

Chapter Three -- Effects of Derivative Products

This chapter discusses a number of key issues raised by the effects of derivative index products on the securities markets in general, and on trading during the market break in particular. It includes background discussions of the continuing institutionalization of the securities markets, the recent increase in the use of passive asset allocation strategies and the level of trading of "baskets" of stocks, and a summary of the benefits derived from derivative index products, as well as their effects on the securities markets.

Chapter Three provides an overview of trading during the October market break. The staff's review of trading patterns during the period October 6 to October 21-- including a detailed reconstruction of program trading activities (e.g., stock index arbitrage and portfolio insurance) -- leads us to the conclusion that no single factor-- economic, structural or psychological -- was responsible for the size and breadth of the October 1987 market break. To the contrary, the staff believes that a variety of factors came into play during the key trading days that affected investment and trading decisions.

Analysis of trading suggests that the initial decline that immediately preceded the October 19 market break was triggered by changes in investor perceptions regarding investment fundamentals and economic conditions. With these changes as the "trigger," institutional stock selling was the largest single direct factor responsible for the initial opening declines on October 19. Finally, panic selling in a broad range of stocks-- caused by a variety of factors -- coupled with a complete absence of buyers (except at distressed levels), was primarily responsible for the free-fall decline that characterized the final hour of trading on the NYSE on October 19.

Accordingly, futures trading and strategies involving the use of futures were not the "sole cause" of the market break. Nevertheless, the existence of futures on stock indexes and use of the various strategies involving "program trading" were a significant factor in accelerating and exacerbating the declines. During certain critical trading periods, index arbitrage or portfolio insurance -- or both -- accounted for between 30 and 68% of total NYSE volume in the S&P 500 stocks. For example, on October 19, arbitrage and substitution programs sold 37.6 million shares, portfolio insurance strategies sold at least 39.9 million additional shares, and other programs sold an additional 11.8 million shares -- together comprising 14.7% of total NYSE volume and 21.1% of S&P 500 stock volume. During crucial individual time periods, moreover, total program selling represented an even greater portion of total S&P 500 stock volume. Between 1:00 and 2:00 p.m. on October 19th, the combination of selling from portfolio insurance and index arbitrage totalled more than 40% of volume in the stocks comprising the S&P 500 index -- and totalled more than 60% of S&P 500 stock volume in three different 10 minute intervals within that hour. As indicated by these statistics, the Division also found that, in contrast to earlier periods of market volatility reviewed by the staff, portfolio insurance selling in stock and futures was significant during the market break, particularly during October 19th and October 20th. Most of the program stock trading that occurred on October 19th and 20th that was not index arbitrage was accounted for by portfolio insurance selling. Much of that stock selling was done by a single large institutional investor that executed large portfolio insurance trades in both the stock and futures markets.

In addition to direct effects, the existence of futures trading and the use of derivative products in index-related trading strategies, in our view, had a significant indirect impact on the markets -- particularly on October 19th -- in the form of negative market psychology. The knowledge by market participants of the existence of active portfolio insurance strategies created, in our view, a market "overhang" effect in both the futures and stock markets; this resulted in the maintenance of futures discounts that discouraged institutional traders from participating in the stock market on the buy side, specialists from committing capital to maintain fair and orderly markets, and block positioning firms from maintaining normal levels of activity.

Finally, we note that the October market break did not result in merely a dramatic one-time reevaluation of securities markets. The aftershocks of October 19 continue to affect the markets today. Quote spreads, liquidity and continuity on the NYSE continue to be substantially inferior to those indicators before the October market break, and actual market volatility has been substantially higher.

In summary, we believe that three dramatic trends have occurred as a result of trading in derivative index products. First, stock index futures have supplemented and often replaced the secondary stock market as the primary price discovery mechanism for stocks. Second, the availability of the futures market has spawned institutional trading strategies that have greatly increased the velocity and concentration of stock trading. Third, the resulting increase in index arbitrage and portfolio insurance trading in the stock market has increased the risks incurred by stock specialists and has strained and at times exceeded their ability to provide liquidity to the stock market.

We believe that these findings are significant and their implications need to be carefully reviewed by the Commission. We believe that the increased concentration and velocity of futures-related trading and resultant increases in stock market volatility can have long term, profound impacts on the participation of individual investors in the stock market. While many individual investors now participate in the stock market through institutional intermediaries, we believe individual participation remains important both for the additional liquidity it provides and for its contribution to consensus support for the U.S. economic system. We are not sanguine that such participation will remain if price volatility akin to October 19 occurs on even an occasional basis. We continue to believe, however, that derivative index markets provide valuable hedging and market timing benefits to institutions and, as a result, any changes to the regulation of those products must be effected with great care. Nevertheless, we believe a number of responses should be thoroughly explored.

Market Basket Trading

One of several alternatives that may be worthy of examination is the proposal to create one NYSE specialist post where the actual market baskets could be traded. A market basket post would alter the dynamics of program trading, in effect consolidating program trades back to a single order. The index specialist would have the informational advantage, not available to specialists in the individual stocks, of seeing the entire program order. Moreover, focusing institutional program trading at a single post might encourage additional block positioning activities, thereby potentially increasing the liquidity on the NYSE floor. While the feasibility and design of basket trading would require substantial analysis, we believe the concept of basket trading deserves the Commission's and the NYSE's attention.

Derivative Product Leverage

We believe thought should be given to steps to bring the available leverage of derivative products in line with the leverage of stock products. We believe this leverage derives from two sources -- cash settlement and margin.

The availability of cash settlement eliminates the risk that a market participant must liquidate its position prior to the termination of the future or accept delivery (and make payment for) a market basket of stocks. The elimination of this risk increases the willingness of market participants to take larger positions with correspondingly tighter liquidation triggers. While a requirement for physical settlement of index futures raises a number of practical problems, the staff will continue to review the feasibility of physical settlement for index products.

The other primary difference in leverage between the stock and derivative product markets is margin. The Division recognizes the distinctions between futures and stock margin. Futures margin is, in effect, a performance bond that does not include an extension of credit. Moreover, futures positions are marked to the market daily and all margin calls generally are required to be paid on a same day basis. For these reasons, futures margin has focused entirely on ensuring that both parties satisfy their respective obligations under the futures contract. Notwithstanding the absence of a debt relationship, however, the margin treatment for stock index futures and options provides significantly higher leverage for users of these products that can be achieved under stock margin requirements. Moreover, the increasing popularity of index substitution, index arbitrage, and portfolio insurance has resulted in an increasingly greater percentage of futures positions being taken precisely for the purpose of replicating cash market stock positions. Yet these positions require dramatically less cash to establish than would the equivalent position in the stock market.

The Division believes that the ease with which an institution or investment firm can increase or decrease the percentage of a portfolio invested in equities through the purchase or sale of derivative index products creates an environment in which investors buy and sell much larger positions than they might otherwise. Moreover, low margins contribute to increased speculative trading that, in normal market conditions, contributes to the illusion of almost unlimited liquidity in the futures market. During a market break, however, that liquidity disappears at a rate geometrically larger than does liquidity in the lower-leveraged stock market. For these reasons, the Division believes that relatively low margins may contribute to increased concentrated institutional trading and resulting greater price volatility.

Therefore, we believe the Commission should review carefully with the CFTC the impact on the stock market of present index futures and options margin levels. This review also should consider whether any benefits obtained from reducing the liquidity demands on the stock and derivative markets outweigh the costs and potentially lower derivative product liquidity resulting from higher margin requirements during periods of normal market activity.

Price Limits

Price limits historically have been employed in the futures markets to address extreme price volatility. While the Division believes that price limits, such as those recently imposed by the Chicago Mercantile Exchange ("CME"), may be a rational response to the present leverage levels in the index futures market, we nevertheless believe that there are substantial problems with their effectiveness. Setting price limits on index futures when there is an active alternative pricing mechanism in the stock market is somewhat self-defeating. The ability of institutions to shift their liquidations to the stock market was amply demonstrated on October 19th and 20th. Moreover, we do not believe, as a general matter, that price limits should be imposed on stock trading, although brief trading halts based on pre-set standards may warrant further consideration.

While we do not favor stock price limits, we do believe that greater coordination of stock and derivative index products trading warrants further review. We believe that the dominance of the future as the price setting mechanism is most dramatic at the opening. The existence of a substantial futures price discount discourages specialists and other market participants from offsetting sell imbalances. Moreover, the ongoing trading in the futures may hinder the opening of the component stocks by encouraging additional waves of sell orders. Finally, the ability to trade futures before the component stocks have opened provides opportunities for firms to "front run" their customers' stock orders, possibly to the detriment of those customers. We believe further review should be made as to whether these concerns might be addressed by restricting the opening of index futures and options contracts until a set percentage (in value) of the stocks comprising the index commenced trading. Similarly, such a review should evaluate whether derivative products should stop trading when trading in an identified percentage of the stocks composing the index has been halted.

Short Sale Restrictions

The absence of short sale restrictions in the derivative markets, coupled with the greater leverage of futures, arguably presents the potential for greater speculative selling than could occur in the stock market. Moreover, through index arbitrage, that selling activity can be transferred to the stock market, often without being subject to Rule 10a-1 under the Securities Exchange Act of 1934 ("Exchange Act"), the short sale rule. Accordingly, the Division believes the Commission should review whether reducing price volatility should remain a goal of the short sale rule and, if so, whether steps should be taken to increase its effectiveness.

Reporting Requirements

In its Report on the Role of Index-Related Trading in the Market Decline on September 11 and 12, 1986, the Division noted the need to develop a "cost-effective, routine means of identifying and maintaining easily accessible records of index-related trading." Since then, the Division staff has worked with the staff of the NYSE to design such a reporting system. Despite recent improvements in this area, however, the Division still experienced substantial difficulties in reconstructing the October market break, impairing the ability of the staff to fulfill its oversight responsibilities and coordinate collection of trading information with the CFTC. Accordingly, the staff believes it would be appropriate to revisit the desirability of creating more specific recordkeeping rules at the broker-dealer level and to examine whether it would be feasible to develop a system, similar to the CFTC's large trader reporting system, for rapidly identifying large traders in the stock market.

As a separate matter, it also may be appropriate to consider how to integrate program trade reporting within the current systems of last sale reporting. In contrast to current systems to monitor and report block trades, there is no regularized reporting of program trades. The Division believes it would be appropriate to consider how to integrate program trading within the context of traditional transaction reporting. If, as some have suggested, program trading is the "block trading of the 1980s," then it seems appropriate to consider whether the more accurate and timely reporting of such trades can be made more readily available on a widespread basis.

Manipulation and Frontrunning

The Report provides a general description of concerns raised by the possibility of intermarket manipulation and frontrunning, as well as an overview of the findings of the reviews by the Division, the CFTC, and securities and futures self-regulatory organizations ("SROs") as to each of these areas during the October market break. While the Division found no evidence to question the CFTC's recently published determination that allegations of possible market manipulation on October 20 in the index futures markets were unfounded, the Division noted several instances of firms apparently trading in futures ahead of customer futures and stock programs, which raise significant concerns. Finally, Chapter Three contains a discussion of recent regulatory initiatives to address intermarket abuses. In this connection, the Division intends to work closely with the SROs and the CFTC to enhance futures and securities exchanges' routine access to each other's trading and surveillance data.

Chapter Four -- Exchange Specialists

Specialist Performance

The NYSE specialist system was placed under enormous strain during the market break period. Although there were some instances of questionable individual performance during this time, specialists as a whole met their market making obligations. They increased their aggregate buying activities and generally maintained markets in their stocks. Specialists often were the primary, and sometimes only, buyers during the morning and afternoon of October 19, with very little buying support from upstairs firms. Nevertheless, market quality deteriorated substantially on the 20th, as the market continued to strain under heavy volume and sell pressure. This is further evidenced by the significant number of delayed openings (92) and trading halts (167) on the 20th due to imbalances.

While specialists, in the aggregate, performed satisfactorily, there was a wide variation in individual specialist performance. In particular, a disturbing number of NYSE specialists on October 19 either were net sellers or did not take substantial positions. This inconsistent specialist performance deteriorated further during the afternoon of October 19 and throughout October 20. In addition, the Report identifies a number of instances throughout the market break where the appropriateness of the opening price set by specialists is questioned. While NYSE specialists' obligations to contribute to price continuity and depth in the markets for their specialty stocks must be viewed in the context of extraordinary price volatility, volume and futures discounts, the performance of certain specialists appears to have been unsatisfactory. The Division's analysis of Amex specialist performance during the market break period indicated a similar decline in overall specialist performance on October 19 and 20, and a disparity among individual specialists' performance. The Amex, however, also had several stocks that were halted for at least one day during the market break period.

In light of our findings, the Division believes that the Amex and the NYSE should examine carefully individual specialist performance during the market break. In this connection, the Division believes the Amex and NYSE must use their powers to reallocate stock pursuant to their rules where they identify specialists that exhibited a substantial or continued failure to maintain fair and orderly markets. Further, the Division believes the wide disparity in specialist performance underscores the need for

the Amex and NYSE to develop relative, objective standards of performance for evaluating specialists.

Equity Specialists' Capital

During the market break, specialists at the NYSE increased their aggregate securities positions to at least twice that of their normal size with some individual specialist units increasing the size of their positions to four times that of their normal size. This increase in the size of positions resulted in the loss of approximately one-half of the buying power usually available to the specialists. At the end of trading on October 19, thirteen NYSE specialist units had no buying power.

The experience on October 19 and 20 demonstrates that the financial position of many specialist firms can become critically strained during a major market break. While specialist capital appears sufficient in normal trading situations, the staff is not confident that it will remain sufficient if the markets continue at their present volatility levels. Although the staff is not able to conclude that additional capital would have retarded to any great degree the market decline of October 16 and 19, the staff believes that additional capital might ensure that in any future down market specialists do not reach the limit of their buying power or become in jeopardy of failing.

In light of the above, the staff believes that further analysis of the specialist financial responsibility system should be conducted. In particular, the staff is concerned that the present minimum capital requirements imposed by the Amex, NYSE and the regional exchanges do not reflect the actual capital needed to ensure the maintenance of fair and orderly markets in different types of securities. Accordingly, the staff believes that the exchanges should consider revising the minimum financial requirements imposed on specialists to reflect more closely the requirements of today's markets. Moreover, the Division will review the appropriateness of applying the Commission's net capital rule to all specialists.

In this connection, the staff also has identified substantial limitations in the exchanges' present system of specialist surveillance. Accordingly, the Division will review with the exchanges possible modification by the exchanges of their existing specialist monitoring systems in order to increase the level of surveillance currently maintained.

Finally, the Division is concerned about potential difficulties specialists may have in obtaining financing during periods of market turbulence. Accordingly, we believe that the exchanges should explore the possibility of requiring all "self-clearing" specialists to maintain a line of credit with a bank or other lending institution or face higher capital requirements.

Chapter Five -- Analysis of Capital Adequacy

Upstairs Firms

In general, the large investment banking and retail firms suffered substantial losses in October as a direct result of the market crash. However, none fell below the net capital early warning levels. Of the approximately 6,700 firms dealing with customers and/or trading for their own account, about 60 were at some time in violation of the net capital rule. Of that number, only three carried customer accounts and only one of those had to be liquidated under the Securities Investor Protection Act. The remainder of the firms traded solely for their own accounts and/or introduced their customer business on a fully-disclosed basis to another broker-dealer.

In light of the increased volatility in the market, the Division believes that certain matters should be reviewed. First, the minimum net capital required of broker-dealers that (1) carry customer accounts, (2) introduce customer accounts on a fully-disclosed basis to another broker dealer, and (3) are market-makers in OTC securities should be reexamined. Second, the net capital rule should be reviewed to determine whether to require broker-dealers to take haircuts for their securities related futures positions that are independent of margin requirements and are related to the past volatility of the underlying securities. Third, the level and structure of haircuts for equity securities should be reexamined. In this connection, consideration should be given to establishing several levels of haircuts to differentiate among different types of securities. Moreover, attention should be devoted to whether equity haircuts alone are a sufficient leverage limiting device for firms that do not carry customer accounts, but either trade for their own accounts, act as market makers or clear through another firm. Finally, financial activities conducted in affiliates of a broker-dealer should be reviewed for their potential exposures to the broker-dealer and the financial markets generally.

Liquidity of Broker-Dealers

Bank lending to the brokerage community as a whole increased significantly during the week of the market break. While no precise measurement is available, data from the Board of Governors of the Federal Reserve System ("FRB") indicate that loans by banks to purchase and carry securities, including loans to broker-dealers as well as to mutual funds, increased by almost fifty percent during the week of the break.

Following the market break, the availability of credit to broker-dealers did not decrease on a generalized basis. Banks continued to make credit decisions on a client-by-client basis, taking into account the perceived creditworthiness of their customers, the value of securities pledged as collateral for secured loans, and the strength of their security interests. Most banks reported that their clients did not seek loans in excess of the banks' internal lending guidelines and that these loans were usually provided. It is not clear, however, that banks would have continued to provide liquidity to the same extent had the DJIA continued to drop significantly on October 20.

Banks were more cautious in making lending decisions during the market break. In response to the market decline, some banks made intra-day margin calls and lowered advance rates for particular borrowers. Specialists, risk arbitrageurs, and other firms rumored to be experiencing problems, including some major broker-dealers, were required by individual banks to provide additional collateral or to change the nature of their security arrangements. Finally, bank concerns over credit exposures contributed to some delays in futures and options clearing corporation settlements, as well as settlements of foreign currency transactions.

While banks continued to provide broker-dealers necessary financing and settlement assistance, the market break underlined the critical importance of ensuring broker-dealer liquidity when the market system is under strain. The Division believes that the actions of the FRB and the Federal Reserve Bank of New York to encourage major banks to continue their prudent financing of securities firms were critical in avoiding any potential for a liquidity gridlock. In order to reduce risks of liquidity problems in any future market break, the Division believes that the self-regulatory organizations should review with broker-dealers the desirability of establishing diverse lending relationships with a number of banks, as well as the feasibility of obtaining more committed lines of credit than currently exist.

Options

Total market maker deficits at all options exchanges for those market makers that clear through the 16 clearing firms designated to the Chicago Board Options Exchange ("CBOE") for examination for compliance with financial responsibility requirements increased from approximately $6.2 million on October 14 to $137 million on October 23, a net increase of $130.8 million. On October 20, there were 164 market makers whose accounts were in deficit with an aggregate total deficit of approximately $217 million. During the October 14 through October 30 period, the market maker equity at all options exchanges for market makers carried by the 16 CBOE designated clearing firms decreased by approximately $287.5 million, from approximately $835.9 million on October 14 to approximately $548.4 million on October 30.

Aggregate net capital of CBOE designated clearing firms increased by approximately $178 million, from approximately $121.9 million on October 14 to approximately $300 million on October 30. The increase was due primarily to capital infusions and dramatic reductions in options market makers' positions. However, some clearing firms experienced severe liquidity problems. A number of factors contributed to the firms' liquidity problems, including: (1) intra-day variation margin calls; (2) difficulties in financing stock and options positions through banks; (3) problems with returned stock loans; and (4) market makers' withdrawals of equities from their accounts.

The liquidity problems experienced by clearing firms suggest that the following issues should be explored: (1) whether market makers should be required to maintain minimum equity in their accounts equal to the perceived risks in their positions; (2) whether there should be concentration haircuts for short options positions, either on a market maker by market maker basis or on a total clearing firm basis; (3) whether the net capital provision providing that aggregate market maker haircuts cannot exceed ten times the clearing firm's net capital for a period exceeding five consecutive business days should be amended to reduce the five business day grace period; (4) whether the provision of the net capital rule that permits some options market makers that are not exempt from the net capital rule to avoid under certain circumstances the haircuts on their option positions should be eliminated; (5) whether self-clearing options market makers should be permitted to carry the accounts of independent market makers without having the net capital requirements of other firms; and (6) whether there should be limitations on the withdrawal of market makers' equity from their accounts.

In addition, the Division believes that the options clearing firms, options exchanges and the Options Clearing Corporation ("OCC") should enter into discussions with banks to encourage them to develop guidelines that would allow them to extend credit with confidence on in-the-money options positions.

Chapter Six — Issuer Repurchase Activity

In light of the significant number of issuer repurchase program announcements during the week of October 19 to 23, the staff conducted an analysis of repurchase activity of S&P 500 companies during this period. The staff analyzed the impact of repurchase volume and announcements on market price performance, and examined the operations of Rule 10b-18 under the Exchange Act.

The staff found that stock repurchases by many S&P 500 companies represented a significant proportion of the trading volume in their shares during the week. Purchasing activity had a favorable impact on price performance, and the effect on the announcement of a repurchase program also appeared to be positive.

While most issuers apparently followed the requirements of Rule 10b-18, the treatment of block purchases under the rule may effectively negate the volume limitation for many securities. As a result, a number of issuers were the predominant buy force in their common stock after they commenced their repurchase activity. The staff expects to continue its review of the impact of issuer repurchases and the possible need for amendments to Rule 10b-18.

Chapter Seven -- Exchange Operational Performance

Market Information Systems

Market information systems were not subject to any major breakdowns or delays. The central processor for transaction and quotation information for listed equity securities, the Securities Industry Automation Corporation, experienced only two brief outages in reporting transaction information. The NASD experienced some delays on October 19 and October 20 in one of its services for providing transaction and quotation information to securities information vendors. Securities information vendors also did not experience many interruptions or delays in providing service. While the performance of equity information systems did not raise significant concerns, the Division believes that the NYSE should review whether it has adequate personnel and facilities to maintain accurate trade and quote reporting capabilities during periods of sustained high volume.

Although there were no system-wide interruptions or delays in disseminating options transaction and quotation information to securities information vendors, two problems did occur. First, as the value of underlying securities and indexes changed dramatically, the number of new options series that were created was much greater than usual. The addition of these new series to existing data bases strained the resources of several securities information vendors. The second problem relating to options information occurred when premiums reached three digits. Because three digit premiums previously had been a rarity, the options information message format only allowed two digit price information. Consequently, premiums with three digits were incorrectly reported.

Order Handling

The Division's review of order entry and routing procedures during the market break highlights at least two areas of concern. First, many broker-dealers appear to have been nearly overwhelmed by the surge in order flow. Notwithstanding the fact that 600 million share days may not have been within the realm of reasonable expectations, some firms may not be routinely reviewing and assessing their capacities to accept orders from their clients and route the orders to the appropriate destination. Second, it is apparent that at least one major service bureau suffered operational problems that resulted in delays in order routing and execution reporting for a large number of firms. In light of the stress placed on firm order handling systems during the market break, the Division believes that firms should develop contingency plans to cope with unusual volume. These plans should include back-up computer systems, cross-training of personnel and better communication with public customers. In order to ensure that these reviews regularly take place, the self-regulatory organizations and the Division should include a review of operational capacity in broker-dealer examinations. Moreover, because many firms rely on service bureaus to perform external order routing functions and these systems interlock and are dependent on the operations of the routing and execution systems of the exchanges, the entire network should be examined to determine the causes of inefficient operations during the market break. In this connection, the staff will review whether some degree of regulatory oversight of service bureaus is desirable.

Automated Order Routing and Execution Systems

Problems with the NYSE's Designated Order Turnaround ("DOT") system caused many delays in executing trades. Several components of DOT, which permits automated routing of small orders of up to 2,099 shares and the sending of orders in lists of securities, frequently were overburdened.

Moreover, all the small order routing and execution systems of the regional stock exchanges also experienced significant delays, particularly on October 19 and 20, in executing orders through their systems. The Pacific Stock Exchange ("PSE") SCOREX system encountered the most significant problems, losing both orders and trade reports, due to a system capacity overload. The Midwest Stock Exchange ("MSE") and Philadelphia Stock Exchange ("Phlx") also had large queues for orders entering their respective systems. Phlx reverted to a manual execution system during most of the week of October 19 and, under manual mode, dispensed with sending execution reports to member firms until after trading hours. On the other hand, the MSE attempted to increase its system's capacity throughout the week of October 19 and by October 26 was able to add an additional computer to increase capacity.

The problems encountered during the week of October 19 highlight the critical need for all exchanges to implement quickly system improvements to enhance their ability to handle volume surges in the future. Moreover, the Division believes the Commission should consider whether to request that the PSE and Phlx refrain from adding new firms on their systems until they have made progress in increasing system capacity.

The problems during the week of October 19 also underscore the need for the markets to inform, in a timely fashion, member firms of any problems and delays in their systems in addition to any reductions in guarantee limits. Coordination among the markets, especially when systems are down and order flow may have to be sent to another market, also should be improved.

Finally, substantial delays occurred in routing orders through ITS. ITS is a communication system that links the seven major stock exchanges and the NASD. In addition, ITS suffered from the failure of the ITS plan to provide for a pre-opening notification routine after trading imbalance halts, as well as a general lack of communication among the participating exchanges. The staff determined, therefore, that modifications in the exchanges' order routing and support systems and improved communication between exchanges would result in a more efficient performance of ITS during periods of high volume.

Chapter Eight — Performance of the Options Markets

The options exchanges experienced a number of problems throughout the week of October 19 due to the extreme price volatility in the market for the underlying securities, the absence at times of useful market information concerning conditions in the equity and futures markets, and the difficulty market makers faced in trying to hedge their options positions. The impact of these factors is reflected in the large number and protracted nature of trading halts called in individual equity options and index options; in the fact that prices, or "premiums," charged for option contracts, particularly put contracts, were inconsistent and often unrelated to price movements in the underlying index; and in the notable unwillingness of some options market makers to foster liquidity by trading on a continuous basis. In particular, the options markets did not provide an effective, continuous market for the most actively traded index options classes at certain times on October 19 and for virtually all of October 20. Accordingly, the Division believes there are a number of areas that require review by the Commission and the options exchanges.

First, the Division and the exchanges may wish to reconsider the efficacy of rules that currently permit options on indexes of securities to open prior to the opening of all component securities in the underlying market and to continue trading for a certain time even though underlying component securities are not trading. Second, the options exchanges, particularly the CBOE, need to examine methods to speed up opening rotations. Index option opening rotations were excessively long on October 20, and, in the opinion of the Division, limited the ability of options customers to receive timely executions, and contributed to higher premiums being charged in some options series. Third, the Division believes there is a need for the options exchanges and market information vendors to develop a plan concerning what options series, if any, should be delisted from vendor quotation services when vendor data base capacity is outstripped. Fourth, the Division believes that the performance of small order execution systems during the week of October 19 evidences the need for the CBOE and the Amex to revisit their rules governing market maker participation in these systems. Fifth, the Division believes that the performance of index options market makers on both the CBOE and Amex, particularly on October 20, warrants close examination by these exchanges to determine whether they met their obligations to maintain, to the maximum extent possible, fair and orderly markets.

Chapter Nine — The OTC Market

During the week of the market break, the prevalence of unreliable quotations, delayed transaction reports, reduced market maker participation, and increased manual order handling, coupled with greater telephonic inquiries, undermined the liquidity and orderliness of the OTC market.

During the market break, the OTC market suffered from a combination of extreme downward volatility and unusually high share volume. An extraordinarily high number of locked and crossed markets disabled the NASD's automated Small Order Execution System ("SOES"), as well as similar systems operated by individual market makers, forcing market makers to execute transactions of small size manually. Because of the difficulty in reaching other market makers by telephone, customer orders for securities whose markets were locked or crossed were often not executed in a timely manner, not executed at all, or executed at prices that reflected only a securities firm's best estimate of the prevailing market.

The NASD has responded to problems encountered during the market break by proposing a number of initiatives. These initiatives include raising the penalty for unexcused withdrawals by market makers from NASDAQ; requiring all NASDAQ market makers to participate in SOES; providing that SOES executions will continue in an OTC/National Market System security when quotes are locked or crossed; eliminating preferencing of market makers when a locked or crossed market exists; and establishing the Order Confirmation Transaction service that will permit firms to access market makers over the computer without voice contact. While the Division believes that these proposals demonstrate a willingness by the NASD to respond to the serious breakdowns that occurred during the market break, we believe there are a number of additional areas that merit attention.

First, the NASD, as part of its self-regulatory responsibility, should review the conduct of market makers during the market break to ascertain whether they complied with the NASD's rules. Second, the large number of transactions reported out-of-sequence by particular firms may be an indication of the firms' inability to comply with the transaction reporting rules. Third, the NASD and the Commission should reconsider, in light of the market break, the need to require market makers to include realistic sizes as part of their quotations. Fourth, the NASD should consider additional steps that would ensure the ability of market makers to execute electronically against other market makers' quotations during high volume periods.

Chapter Ten — Clearance and Settlement

During October 1987, clearing agencies, broker-dealers, and securities markets cooperated successfully to compare, clear and settle unprecedented sustained daily trading volume. Although the volume placed tremendous strain on personnel and systems, the vast majority of that trading volume was cleared and settled within routine time frames. Volume and record price volatility also increased dramatically the financial risk of loss to clearing agencies and their members. Although some losses were suffered, clearing agency safeguards were effective in preventing significant or widespread losses.

The record trading volume and securities price volatility experienced during October 1987 does suggest, however, the need for improvements in two primary aspects of the clearance and settlement process: (1) post-execution trade processing, and (2) clearing agency safeguards against member default.

The NYSE, NASD and Amex should consider accelerating efforts to compare all trades on trade date. Currently, over 50% of share volume is compared through two-sided trade input that results in compared trades several days or longer after trade date. The October 1987 experience indicates that the current two-sided comparison process cannot be completed fully on a timely basis with sustained daily trading volume exceeding 600 million shares. Those considerations should include expansion of automated systems which permit comparison at or near the time of trade execution.

Clearing agencies also should consider a variety of enhancements to their risk management systems to reflect increased risks that result from increased price volatility and trading volume. Those considerations should include enhanced member monitoring systems to enable clearing agencies to obtain better and more up-to-date information about members' financial strength, activity in other markets, and customer activity. Clearing agencies also should consider whether risks posed by individual members require increased capital requirements or the deposit of additional assets with the clearing agency.

Options clearing systems and market participants also should reexamine safeguards and consider improvements in light of events in October 1987. As demonstrated in October, equity price volatility can generate geometric increases in options price volatility. The OCC should consider the same member monitoring improvements as equity clearing organizations as well as how those monitoring techniques can provide better early warning of risks and what increased measures should be taken to guard against those risks. Moreover, basic volatility assumptions and margin formulas should be reassessed in light of the record volatility in October. When OCC margin is insufficient to cover intra-day volatility, OCC resorts to variation margin calls to protect itself. Events in October suggest that OCC should reassess the manner and timing of variation margin calls to determine whether it can obtain earlier warning of and protection from potential member insolvency, especially for volatility that occurs late in the trading day near the close of banking hours. Finally, OCC, the commodities industry, and regulators should discuss ways to coordinate margin requirements and settlements for entities involved in securities options and futures market activity.

Chapter Eleven -- Internationalization

The interdependency of the world's securities markets was never more apparent than during the market break. The Commission staff's findings indicate that the major world markets responded quickly and dramatically to movements in other major world markets and that, for the most part, U.S. markets led foreign markets.

To some degree, the interdependency of the markets is the result of cross-border investing by market participants who are seeking new ways to diversify portfolios. Although there were rumors that foreign investors were abandoning U.S. markets when the DJIA turned sharply down, the staff has not found evidence to support this belief. Foreign investor activity does not appear to have had a disproportionate effect on U.S. market moves. U.S. investors also appear to have engaged in substantial trading in foreign markets during the break. Much of this trading, however, was probably pre-negotiated crosses, arranged in the U.S. and executed abroad for convenience.

Although the major world markets may have experienced varying degrees of foreign investor activity during the break, the markets uniformly were besieged by enormous sell pressure. Thus, the staff examined how London, Tokyo and Hong Kong fared under this extraordinary pressure. London operates in a manner similar to the NASDAQ market and, although it continued to function throughout the break, experienced many of the same problems as the NASDAQ market. For example, instances of widened spreads and reduced quote sizes were reported. Market participants also

indicated that some market makers were not answering their telephones and that locked and crossed markets were not uncommon.

Tokyo also suffered under the strain of huge sell-order imbalances. On Tuesday, October 20, the implementation of daily price limits and huge sell-order imbalances halted most trading in that market. Finally, in response to the unprecedented volatility around the world, the Hong Kong markets closed for four trading days in the hope that those markets would avoid the calamitous drops other markets experienced. Nevertheless, upon reopening, the Hang Seng index plunged 1,180 points, a 33% drop.

The growing internationalization of the markets presents many challenges to the world's securities regulators. The events of October 1987 brought to the forefront the degree to which events in one market can affect other markets and emphasized the need for greater international cooperation and initiatives. Regulators can respond positively to these developments by working together to develop trading, clearance and settlement linkages and other arrangements; international trade and quote reporting mechanisms; adequate financial oversight systems; and effective enforcement and surveillance arrangements.

Chapter Twelve -- Investor Complaints

Chapter Twelve is devoted to the detailed analysis of investor complaints and inquiries received by the Commission and the self-regulatory organizations in the aftermath of the October market break. The chapter describes the results of the intensive program undertaken to identify and categorize the types of problems experienced by individual investors, as well as to document the general perceptions of investors during this period. A brief summary of telephone complaints/inquiries is included, with the primary focus on the analysis of the 1,283 letters received through December 15, 1987.

The findings of this study indicate that problems involving order execution accounted for the highest percentage (43.3%) of investor complaints by far. The next two most frequently cited categories, each representing approximately 10% of the market break complaints, were confirmation problems (10.4%) and margin maintenance problems (10.1%). A public commentary category, that tracked letters containing general comments on the market break situation, accounted for an additional 10.7% of the complaints. A majority of these expressed concerns about program trading. Although emphasis was placed on identifying abusive sales practices, the market break complaint data revealed a slight decrease in this area when compared to the percentage of Fiscal Year 1987 sales practice complaints. It may be that these types of complaints were delayed while the investor attempted to resolve the problem with the broker-dealer. Consequently, this percentage may increase over time.

The staff concludes that it is important to move to address systematic problems that impacted order execution and confirmation of orders for small investors. The staff recommends review and modification where necessary of disclosure in account opening agreements concerning margin calls and options risk disclosures. Finally, the staff suggests that information contained in customer complaints be utilized in targeting broker-dealer examinations.

The **Chairman**. The committee will come to order. We have another witness this morning and this is a very important, complicated subject so a lot of Senators will be coming back. There will be a number of questions, so we're going to get going as rapidly as we can.

First, I want to recognize Senator Sarbanes for his opening statement.

OPENING STATEMENT OF SENATOR SARBANES

Senator **Sarbanes**. Mr. Chairman, I'll be very brief. I simply want to say to Chairman Ruder and his colleagues that while I have not yet had a chance obviously to go through the report by the Division of Market Regulation of the SEC, that I have had the chance just quickly to look through it, and I can appreciate from that examination the kind of commitment and hard work and energy and effort that was thrown into producing this report, and I want to commend the SEC for it.

I think this is an extremely important subject. I sense, unfortunately, there are some who simply want to dismiss away with a wave of the hand what happened in October. Nick Brady was very clear yesterday in making the point that it could happen again, that we remain at risk. Therefore, I think it's imperative that we explore and determine what happened and why it happened and what can be done to set into place provisions and mechanisms which, to the maximum extent possible, to make sure that it will not happen again.

So I simply wanted to take this moment at the outset, because I may have to leave, to thank the Chairman and his associates at the SEC for the obvious hard work that went into preparing this very comprehensive and detailed report.

Mr. **Ruder**. Mr. Chairman, may I respond just briefly to Senator Sarbanes?

The **Chairman**. Of course.

Mr. **Ruder**. Senator, I thank you for those comments and I would like, in turn, to thank you and the other members of the committee for the support that you gave us in the budget appropriations matters. The language which was inserted finally in the text of the budget has been very helpful to us in allowing us to expand our resources this year, and I want to express my thanks to you as a member of the committee that was doing that hard work.

The **Chairman**. Thank you very much.

Chairman Ruder, when former Senator Brady appeared before this committee yesterday, he encouraged the Congress and he has encouraged it in the report to act promptly. The voluminous report you produced also contains recommendations for action.

Most of us on the committee want to heed that call. As you've heard, I've been asking the regulatory agencies to provide specific legislative suggestions.

Would you, on behalf of the SEC, provide those specific recommendations for whatever you feel the Congress should adopt to improve our financial markets by March 4, and since the SEC is an independent agency, I ask that you make this report without consultation with the executive branch. Would you do that?

Mr. Ruder. We will make that report to you, sir, and it would not be normal for us to consult with the executive branch before providing legislative recommendations to you.

The Chairman. That's very reassuring. I appreciate that very much. Thank you.

SHORT SALES

Now in 1986 the SEC decided to exempt broker-dealers from the uptake rule on short sales. The uptake rule being of course is on the downtake that as you know one of the very serious problems in the crash in 1929 and the ensuing collapse of the market over several years was that the bears drove it right down. So in 1938, action was taken to prevent sales on the downtake.

Now the rule generally is intended to prevent short sales in a collapsing market, sales that would further fuel the collapse. But Merrill Lynch argued successfully that this rule interfered with arbitrage that is useful in keeping the futures and the stock market prices matched.

Evidence from the crash suggests considerable short selling amounting to several billion dollars by brokerage firms in the absence of uptakes.

Have you examined the evidence that establishes whether or not the short sales were legitimate and can you please supply that evidence, if you have it, for the record?

Mr. Ruder. Our Division of Market Regulation has examined this issue and has reported specifically to me that there is no substantial evidence of violation of the uptick rule during this market problem. But they are continuing their investigation and, of course, if we do find some violations of this rule, we will take the necessary disciplinary action or encourage the New York Stock Exchange to do so. And if we find substantial evidence of that we will report it to you.

The Chairman. Will you submit the study that examines whether or not there's evidence that would provide such evidence to us?

Mr. Ruder. To the extent it's not already in our study, I will do so, yes, sir.

The Chairman. Well, I haven't had a chance to go into the details of your study. Do you include that in your study?

Mr. Ruder. I can't tell you the answer to that question either, sir, but I'll ask the staff to tell me whether that's specifically there. If it is, we will point it out to you and if it's not we will give you additional data.

The Chairman. Whether or not these sales may have been part of the arbitrage efforts and whether, in this case, they may not have contributed to the enormous drop, is it possible that the SEC may rethink this exemption?

I got the impression—and I wish I'd kept the quotation from your predecessor, John Shad—but I got the impression that Chairman Shad had had second thoughts about the exemption and thought that it might be revisited and possibly the rule, as originally established, might be restored.

Mr. Ruder. The rule as originally established did not exempt broker-dealers generally. It only exempts specialists, such as those on the floor of the New York Stock Exchange, from the rule. So I do not think there is any movement at the SEC to remove the exemption for specialists. Likewise, there is no movement at the SEC to remove the short sale prohibition as such.

The **Chairman**. Well, the reason I asked that is just from the standpoint of an innocent tenderfoot in this area. It seems to me that it's natural for somebody who wants to make a killing selling short, to drive the market down, down, down. It's my understanding that Percy Rockefeller in the early 1930's made $300 million at that time—it's probably worth $3 billion now—by pursuing that kind of strategy and it worked. It was that realization, as I understand it, that persuaded the SEC—I think when Joe Kennedy was Chairman—to provide for that downtick-uptick rule.

Mr. **Ruder**. The rule provides that one may sell short only on an uptick, and an uptick is another expression for the fact that the market must have gone up prior to the short sale. Even in a volatile market such as we had, there was opportunity for short selling. For instance, on October 20, there was a substantial rise in the market in the morning and an opportunity for short selling to be done.

I think more disturbing analytically is the fact that it's possible to sell a portfolio of securities in the futures market where there is no short sale prohibition. So that the kind of strategy that you are discussing can be accomplished in the derivative index market in a way that cannot be accomplished in the stock market.

The **Chairman**. Would you consider applying such a rule to the futures market?

Mr. **Ruder**. We have looked at——

The **Chairman**. Or are you recommending that?

Mr. **Ruder**. We are not. Our staff has looked at that very carefully. It is an extremely difficult rule to implement in the context of a derivative market. In the futures market the implementation of such a rule would, I think, bring that market close to a halt; and it's one which we have looked at but we rather despair of in any way accomplishing that objective, even if that objective should be seen as the right one. I cannot tell you that there is any conclusion or even staff recommendation that such an effort should be put forward.

We do make a recommendation that the whole short sale area be looked at in a very, very detailed way, and I may say that is one of those things that was so complicated that we really couldn't come to a conclusion on it during this short period of time.

The **Chairman**. Well, is the SEC making that kind of an inquiry now—making that kind of a study?

Mr. **Ruder**. We will continue to study it; yes, sir.

The **Chairman**. Please keep the committee apprised of it.

Mr. **Ruder**. Yes, I will.

The **Chairman**. Now both your staff report and the Brady Commission report suggest that specialist performance was weak, perhaps that specialist capital was inadequate, and that their capital needs to be improved.

RECOMMENDATIONS AS REGARDS SPECIALISTS

What disciplinary procedures do you recommend that the stock exchange and Amex utilize with respect to the specialists in order to improve their performance?

Mr. **Ruder**. I might at the outset say that in general I think our staff and our Commission believe that the specialists performed, on a whole, extremely well in the market. They performed quite well on Monday the 19th. On Tuesday the 20th, they did not perform well as a group.

The **Chairman**. It's the Terrible Tuesday that I'm referring to.

Mr. **Ruder**. It's Terrible Tuesday that I'm sure you're referring to. There are two problems that need to be addressed here. One is that there was some difference between various specialists. That is, some single specialists did a rotten job, if I could put it that way to you; and in our report and in our recommendations as a Commission we are encouraging the New York Stock Exchange to expand its disciplinary procedures and to establish more objective indications of specialists' performance and then to reallocate specialists' positions where they find that specialists have not done their job.

The **Chairman**. Isn't adequacy of capital here critical?

Mr. **Ruder**. The second aspect of the specialist area is capital adequacy, and here we are again recommending that steps be taken to increase specialists' capital. I should make a distinction between capital and liquidity and the willingness to take risks. What we are concerned with with regard to capital and liquidity is that there were certain specialists who had reached the limit of their buying power and, with regard to those specialists, we believe that it would be important that there be additional capital and liquidity available to them.

There's another whole question of whether there's sufficient capital, liquidity, and risk taking willingness within the system; and we think that needs to be addressed more globally by looking at the total amount of capital available in the system.

The **Chairman**. Now if the exchanges don't take enough action to police specialist performance, what actions can the Securities and Exchange Commission take directly?

Mr. **Ruder**. Well, we do not have the power directly to order the New York Stock Exchange to take action. We do have power to initiate rules and to discipline exchanges.

The **Chairman**. Do you think you should have that power?

Mr. **Ruder**. Well, I may add that we have a great deal of ability to persuade with regard to the New York Stock Exchange. We do an annual inspection of the exchange. And when we make suggestions to them they respond, and we have found they respond very well.

For instance, recently we suggested that they increase their surveillance systems with regard to market manipulation, and as a result of our suggestions to them the New York Stock Exchange has increased its market surveillance system.

So I think that our suggestions in this area will be readily received. The stock exchange has already reallocated two specialists' posts. I think it was the first reallocation of specialists' posts that the stock exchange has accomplished in the last 20 years, and they have already given us a rule proposal, which we have approved, to eliminate the cap on fines which the New York Stock Exchange can impose against its members. So the New York Stock Exchange regulatory arm now has two weapons against its members. One is its reallocation power which it has always had, and another is the possibility of very large fines if they find that people aren't performing correctly. I expect them to use that power and all conversations I've had with John Phelan on that front have indicated he plans to do so.

The CHAIRMAN. Well, when you make your report on March 4, if you think the SEC should have any residual power of any kind in that respect, let us know.

Mr. RUDER. We will.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

AREAS OF AGREEMENT BETWEEN SEC AND BRADY COMMISSION

Chairman Ruder, I'd like to ask you if you would to specify the areas where you and the SEC would agree with specific recommendations that have been made by the Brady Commission.

Mr. RUDER. That's a pretty tall order, Senator Riegle. I can tell you that with regard to our analysis, we believe that the Brady Commission analysis was essentially correct. One area of disagreement is with their indication that among the circuit breakers there should be automatic price limits on stocks. To the extent they are making that suggestion, I think we disagree with them.

And we certainly disagree with them with regard to their suggestion that the Federal Reserve Board is the appropriate agency to break ties or to serve as the overseer of the securities and futures markets.

Senator RIEGLE. Where would the areas of agreement be?

Mr. RUDER. Well, practically all other areas are ones with which I think we're quite in agreement with the Brady task force. There's one other disagreement in terms of conclusions. The task force suggested that had the New York Stock Exchange's DOT system—the automated order routing system—not been disconnected, that the efficiencies within the unified stock and futures markets would have been greater. Our staff report is not able to make that same conclusion.

But in general, with regard to what should be done, I think it's important that both the Brady Commission and the Securities and Exchange Commission believe that the first thing that should be done is to enhance the systems to make them more efficient. We have a unified market, but that market was not expecting the kind of volume and pressures which were on it. In our report, there are numerous suggestions for changes throughout the entire system to enhance its capabilities. We believe that the first step, in order to analyze what's going on here, is to have a system which is capable of operating.

The system is not designed—in a sense, it wasn't developed in a way—to expect this kind of volume, and we have an enormous number of suggestions for changes in that regard.

Senator **Riegle**. Well, let me ask you specifically on the four recommendations that they have made. One is that one agency should coordinate the overall regulatory situation. They have suggested the Fed. You filed your dissent from that today. But apart from who had the responsibility or even if a new entity were created, do you agree with that notion, that there should be an overarching regulatory structure of the kind that they have suggested?

Mr. **Ruder**. No, sir. I believe that the first way this should happen is through coordination, and the second thing that should happen, is that if there is any tie-breaking, it should be done at the SEC. I do not think that the creation of another level of government over the regulatory system is needed.

Senator **Riegle**. Let me ask you about the clearing systems. They have also said there should be a unified clearing system across marketplaces to reduce risk. Do you agree with that?

Mr. **Ruder**. We believe that a coordinated clearing system is extremely important. What I like to call a systemwide risk analysis needs to be done. This can be done by an exchange of information. We think that if each of the clearing systems is functioning well there can be an exchange of information without having to have a unified system.

Senator **Riegle**. The third suggestion that they make is that margins should be made consistent across marketplaces to control speculation and financial leverage.

Mr. **Ruder**. Our suggestion that the margins in the futures market be increased temporarily is in accord with that suggestion. I do not think we have come exactly to the conclusion that there should be equal margins. You must understand that margin treatment in the——

Senator **Dixon**. Well, I want to correct the record to say that Mr. Brady did not suggest there should be equal margins. That is very clear in his testimony.

Senator **Riegle**. No. I don't think I used the word "equal."

Senator **Dixon**. No, I know.

Mr. **Ruder**. I'm sorry if I mischaracterized it. Would you like to characterize it again?

Senator **Riegle**. Well, I was using the words of the Brady Commission and they said margins should be made consistent so that leaves open the question of relative levels to create a kind of consistency between markets.

Mr. **Ruder**. I think that was the point that the futures industry makes quite well. They have something called variation margin which causes them to put up money as the market moves, and it's a very important aspect of their margin, and I think that anybody that puts in initial margins as opposed to variation margins has to pay attention to what those variation margins are.

Senator **Riegle**. Let me move to another issue and that's to the frontrunning problem, which I'm concerned about and I know you've looked at.

FRONTRUNNING

I want to know what you found in the area of frontrunning and what steps, if any, the SEC is already taking to try to deal with it and any other administrative changes you've made since the 19th and the 20th of October in terms of the official operations of the SEC as they affect the capital markets. So if you could start with the frontrunning and what you found and what you've done and what you've done then in any other area since the break.

Mr. **Ruder**. In regard to the frontrunning question, the securities markets already have rules prohibiting frontrunning. That is within the——

Senator **Riegle**. Did they work?

Mr. **Ruder**. As far as we know, they did. We do not have evidence of frontrunning in the securities markets. The regulatory question is whether there was frontrunning in the futures market, intermarket frontrunning if you will, whether there was a sale in the futures market——

Senator **Riegle**. I really mean the question that way. I'm talking about between markets.

Mr. **Ruder**. We are still investigating that, and we have not completed our investigation on that question. You may note that in our recommendations we urge the CFTC to clarify, strengthen and enforce frontrunning prohibitions in that market.

Senator **Riegle**. When will that be done? I think this is a key issue. We are 3½ months past the crash and I know there's a lot to analyze and a lot has been analyzed, but we ought to know now whether we've had some material evidence of front running between markets.

Mr. **Ruder**. I may say, sir, as you'll see, our October 1987 market break study involved an effort by our staff which was simply enormous. These people gave up their Christmas and New Year's holidays and most of their Thanksgiving and weekends to do this report. I have a note from—I expect that this will be a heavy note day. I've already had three notes, and I expect there will be more. My division tells me that they did in the report describe some indications of frontrunning. I'm going to ask whether it was in the securities market or the combined markets.

Senator **Riegle**. Please. I don't want to go over my time limit, but I do want to finish this question before we lose it.

Mr. **Ruder**. Perhaps Richard Ketchum could answer that question for you.

Mr. **Ketchum**. Senator Riegle, we did a partial analysis of frontrunning, and I don't want to suggest that there is no indication of frontrunning in the securities markets but, we look to the self-regulatory organizations to analyze this area. We have been informed by them they have not found evidence of it. We've made no final conclusions on that.

We did find indications, though, of small numbers of firms trading for proprietary accounts in the futures market prior to executing large portfolio insurance futures trades for their customers.

We also indicated we found more significant trading by firms in their proprietary accounts in the futures market at the opening of the 19th and 20th on the same side of the market, and perhaps on a speculative basis, as their customers' large sell orders on the stock market. Inevitably that trading had the effect of delaying openings of those stocks and impacting the prices which their customers received. That's not classic frontrunning in that there were obviously many reasons to sell futures on the 19th other than knowing that some of their customer orders were to sell.

But it is, I think, a question of fiduciary responsibility of firms that we indicate in the report deserves further attention.

Senator **Riegle**. Mr. Chairman, my time is up. I would hope that we would have the occasion at some point—and maybe my colleagues will do it—to go from A to Z on what is thus far known on the frontrunning problem that may go beyond what's just been said.

The **Chairman**. Senator Dixon.

Senator **Dixon**. Mr. Chairman, I want to thank you for enlarging our understanding of what occurred on October 19 and 20 and giving us the benefit of your expertise on what we ought to do.

Senator Brady when he was here gave us a statement in which he listed his four priorities about what the committee ought to deal with. I'd like to allude to that a little bit and develop your point of view.

MARGIN REQUIREMENTS

On the question of margin requirements, he said the second intermarket issue is margin requirements. I want to first point out so the record is clear that he says, "The task force concluded that margins across marketplaces should be harmonious, not necessarily identical." That's his statement.

Now I noticed in your statement that you point out that, contrary to public opinion disseminated by the media, that the margin requirement on the New York Stock Exchange is 50 percent. You point out regulation T and regulation U of the Federal Reserve Board provide that specialists on the floor of an exchange of over-the-counter market makers may obtain loans collateralized by their specialty or market-making securities on a good faith basis without regard to the normal margin requirements. The loans may be obtained either from another broker-dealer or from a bank. The banks and broker-dealers usually require a margin in the 20 to 25 percent range.

And the fact is that that's what happens with the specialists. They have a margin of 20 to 25 percent. Is that substantially true?

Mr. **Ruder**. Well, for many and probably most specialists, that's correct.

Senator **Dixon**. And is it not a fact that the percentages that I quoted earlier are accurate, that on October 20 the Chicago Mercantile showed a margin of 38 percent and the Chicago Board of Trade showed a margin of 51 percent?

Mr. **Ruder**. No, sir. As I understand, that's not correct. Margins were raised during the market break, but those margins were not, according to the figures given to me, in the range you indicated. The range that I have here is that they were less than 25 percent.

Senator **Dixon**. I would appreciate it if you would at your leisure develop that and give me the figures, and may I pursue further that question by saying this: is it not true that you and the CFTC Chairman and others in an interagency relationship could develop some method by which there would be some kind of reasonably harmonious relationship between the margins?

Mr. RUDER. Absolutely. That is going to be one of the first steps that's going to be taken now that we have moved beyond the study to the action area.

Senator DIXON. Now, Mr. Chairman, the first and fourth priorities of Senator Brady were clearing and credit mechanisms need to be unified across market segments and that the need for better information systems is obvious if someone is to monitor the intermarket trading strategies that are significant to the market system.

Chairman Greenspan has already said that the Fed doesn't want to do this sort of thing, it would not be appropriate, they don't want to present themselves as insurers to the country on the creation of crisis situations in the free market in our society.

But I would ask you in all fairness whether, in a cooperative effort between the SEC and you as Chairman and the CFTC and the Chairman there, that you couldn't work out these kinds of market relationships in a cooperative venture between the two agencies?

Mr. RUDER. I'm very hopeful that we can. There's a first step that has to be taken, and that is that we have to urge the securities market to make more information available. The futures industry has developed much better risk analysis than the stock industry has, and we are going to be asking the New York Stock Exchange and other exchanges to assist us in developing risk analysis information.

Senator DIXON. As a matter of fact, if I could interrupt, is it not so that the futures industry has a highly sophisticated method of determining this kind of risk strategy?

Mr. RUDER. Yes. The reason is their method of trading, however. It's not because they are particularly more concerned with risk analysis as a public policy. It is purely selfish on their part that they are trying to look at the risks which the clearing corporations have with regard to their members. It is there, and I've seen it.

Senator DIXON. Mr. Chairman, if I may—I don't mean to interrupt you, but I have a time limit here. The fact is that the expertise is in the CFTC and the expertise is in the SEC to do the very things that are referred to in the report by Senator Brady. You have that expertise, do you not?

Mr. RUDER. Yes, sir. I have advanced as my first proposition that we do not need to wait for Congress. We do not need to wait for legislation. The self-regulatory organizations and the two agencies need to get together and find ways to improve the system.

Senator DIXON. And would you say that you and your agency are motivated to protect the marketplace, to protect the investor?

Mr. RUDER. Those are our primary charges.

Senator DIXON. And do you feel that that's true of the Chairman of the CFTC and those at the CFTC?

Mr. RUDER. They are charged as well with that responsibility.

Senator DIXON. And has the administration, the President and others in the administration, suggested to you that those of you in the SEC and those of you in the CFTC should work together to protect the investor, to protect the marketplace?

Mr. RUDER. Well, that's the charge which I think we have automatically. I haven't had a dramatic suggestion that we should do what we are already charged to do.

Senator **Dixon**. Do you see any need for an additional agency, a super supervisory agency, over the two of you?

Mr. **Ruder**. I do not, but I personally, and three members of the Commission, see a need for the SEC to have tie-breaking authority in the event that we are not able to reach agreement with the CFTC. I think someone needs to be able to say this is it for public policy purposes.

Senator **Dixon**. Mr. Chairman, thank you. I didn't hear your testimony, if you gave any, on circuit breakers. There has been considerable discussion of circuit breakers, both by Senator Brady, Chairman Greenspan, and I presume there will be by others. I'll ask you whether the CFTC, the Chairman and the members of the CFTC, and you, Mr. Chairman, and the members of the SEC, could address that question as well on an interagency cooperative basis?

Mr. **Ruder**. That is one of the matters which I think will be given the highest priority between the two agencies. I've already spoken with regulators at the exchanges and I think that we can move forward quickly to try to find a resolution of the whole circuit breaker problem. It's not an easy one, and neither our staff nor our Commission has been able thus far, within the limited time we've had, to say this is exactly what we think is right regarding circuit breakers. We need that discussion. We need further analysis.

Senator **Dixon**. I thank the chair.

The **Chairman**. Thank you.

Senator Sasser.

Senator **Sasser**. Thank you, Mr. Chairman.

TELEPHONE COMPLAINTS

Mr. Ruder, after the stock market crash, the North American Securities Administrators' Association set up a hotline that received some 7,000 telephone calls—complaints really within 4 weeks. Most of these calls came from small investors who were complaining about their brokers. The complaints were that brokers couldn't be reached on Black Monday, that trades were not executed on time or that the trades were not executed at all, that brokers had put their clients into unsuitable investments, and that brokers traded for their own accounts when the going got tough before making trades for their customers.

Now the North American Securities Administrators' Association learned to their shock that in the 4 weeks that they received 7,000 complaints on this toll-free hotline that the telephone company turned away 103,000 calls because the hotline did not have the capacity to handle those.

Now a preliminary review of the massive document that the SEC furnished me last evening at 5 p.m. in the afternoon indicates that the SEC received some 9,000 calls.

Did the Securities and Exchange Commission make any affirmative effort to reach out to these people, private investors, in the way that the State association did?

Mr. **Ruder**. Sir, we have an entire branch, if that's the right word, at our agency for handling customer complaints. We receive enormous numbers of complaints each year, both in writing and on the telephone. That is part of our operation, that we reach out to allow customers to make complaints to us.

The number of complaints are approximately 30 to 40 thousand each year. I don't have the exact figures in front of me, but there's just an enormous number of complaints which are received. We do not individually attempt to remedy all investor complaints, but we refer those complaints both to the self-regulatory organizations which do have that responsibility and to the broker-dealers themselves, and when the complaints indicate the need to take enforcement action, we do so.

So we have a mechanism in place. We are responsive to customer complaints.

I may add one other answer to your question, and that is that you are entirely correct that there were an enormous number of complaints regarding execution during the week of the 19th. One of the reasons that those complaints existed was because our systems were simply not adequate to deal with the volume which existed in all markets during that time. And the individual recommendations which we are making to the exchanges and particularly to the regional exchanges, to the New York Stock Exchange with regard to its DOT system and to the NASD, are that they take prompt action to increase their order routing and execution systems so we don't have that problem in the future.

Senator SASSER. Well, Mr. Ruder, isn't it true that one of the major ways that the Securities and Exchange Commission got its information about how investors were treated in the crash was by polling the 30 largest brokerage houses to find out what kind of complaints they were receiving?

Mr. RUDER. That's one of the ways in which we received the information.

Senator SASSER. Well, I'm asking if that wasn't one of the major ways the Securities and Exchange Commission following the crash on Black Monday determined the way in which investors were treated was by polling the 30 major brokerage houses themselves.

Mr. RUDER. It is one of the ways; however, it was not the major way. We had so many complaints reaching us directly from customers that I would have to say that the primary method of receiving customer complaints was directly from the customers, from the self-regulatory agencies, as well as some referrals from the NASAA hotline.

Senator SASSER. Well, let me ask you this. Are you persuaded by virtue of the volume of these complaints that have come in to other bodies, including the Securities and Exchange Commission, that the small investor did indeed get the short end of the stick on Black Monday?

Mr. RUDER. I'm quite persuaded that the small investor was severely penalized by the interruptions in the order routing and execution system.

Senator SASSER. Well, what is the Securities and Exchange Commission doing to remedy that? I noted yesterday in the Brady Commission report that Senator Brady was indicating that in times of great volume and in times of crisis the small investor ought to get preferential treatment. Is that the view of the Securities and Exchange Commission? If so, what is the SEC doing to further that goal?

Mr. **Ruder**. I don't think it's fair to say that the system should be set up so that the small investor gets preferential treatment.

Senator **Sasser**. Is it fair to have a system so that the small investor gets squeezed out like he or she did on Black Monday where you get 103,000 complaints or 120,000 complaints to the Securities Association?

Mr. **Ruder**. Senator Sasser, if you read—and I know you haven't had time to do so—but if you read——

Senator **Sasser**. I didn't get it until 5 o'clock yesterday afternoon.

Mr. **Ruder**. Well, if you had had it at 9 o'clock in the morning, you wouldn't have had time to read it. I can tell you that when you read those chapters in which we address the problems that existed in the New York Stock Exchange with regard to its routing system, with regard to the NASDAQ system and its locked and crossed markets, with regard to the Philadelphia Stock Exchange and its PACE system, with regard to the Pacific Coast Stock Exchange and its SCOREX system, with regard to the Midwest Stock Exchange and its MAX system, you will find a great deal of criticism directed at those exchanges, asking them to now put their houses in order.

It is not criticism. It is only recognition of the fact that no one expected the kind of volume and volatility which occurred in that market. But I will say we've had warning now. We've had warning that the systems don't work, and it's time for the exchanges and the Commission to get together and go forward.

Staff has already initiated conversations with each of the exchanges to form working groups with each of the exchanges in order to see that the recommendations which we have suggested will be implemented as promptly as possible, and I will tell you that I am as concerned as you are about the small investor in this system. I think the small investor has had a misperception that some sort of favoritism has been going on. I don't think that's what happened. I think the small investor simply was misserved by the fact that we had these automatic systems which didn't work.

Indeed, I may tell you that the one exchange which didn't seem to have many problems in its order routing and execution was the Boston Stock Exchange which still has a manual system. What happened was that the automated systems went down.

Senator **Sasser**. Well, Mr. Ruder, I did not mean to be argumentative and I'm pleased that you are sensitive to the problems of the small investors. I think there's a sense in the small investor community that if anybody got took on Black Monday, if they got took, it was the small investors, and that the big brokerage houses took care of their own accounts first and then they took care of their big customers and if a small investor was lucky enough to get through on the telephone, he or she might have gotten taken care of. And I think when this is all pealed back and all the foam is blown off of what occurred, I think the sort of conventional wisdom out there in that the small investor community were left holding the bag, I think they are going to find that they were correct and I'm delighted that the SEC is taking the view that something needs to be done to reassure the small investor and see that it doesn't happen again.

The **Chairman**. We have another witness that we hope we will have an opportunity to have up. I have some questions I would like to ask, but I will submit them for the record and perhaps you can answer them for the record.

Senator Dodd.

Senator **Dodd**. Well, Mr. Chairman, having just arrived from the INF hearing and everything else, I will submit my questions if I'm the last person to raise questions.

The **Chairman**. Well, Senator Riegle has a couple of questions.

Senator **Dodd**. Well, let him go ahead and I'll catch up a little bit.

The **Chairman**. All right. Then we'd like to go ahead with the second witness as soon as possible.

Senator **Riegle**. Chairman Ruder, can you tell me what types of cases have been referred to the Enforcement Division in the wake of October 19 and 20?

Mr. **Ruder**. I can't.

Senator **Riegle**. Are there some?

CASES REFERRED TO ENFORCEMENT DIVISION

Mr. **Ruder**. I'm not allowed to discuss enforcement cases. I do not, even as a matter of course, attempt to learn what the details are of enforcement matters since I think it is better policy that I do not know about these matters until they reach the table or until they reach the point where I need to have conversations concerning where they should go.

Senator **Riegle**. How would you suggest then that we try to understand the degree to which there may or may not be a pattern of problems that may have arisen around which enforcement actions may be occurring?

Mr. **Ruder**. If you wish, I will ask the Enforcement Division to summarize for me the complaints and referrals that they've had as a result of the market crash in a very general way and submit that to you, Senator.

Senator **Riegle**. I would appreciate that. Is there anybody here today who can do that in a general way?

Mr. **Ruder**. Our Division of Enforcement is not represented here. Our general counsel is here, but I don't think that he is in the position to make that kind of——

Senator **Riegle**. I think it's important that we get that, so I would appreciate that summary and I understand that you're not going to get into specific cases, but I think we need to know if there is a pattern or a burst of cases that have come out of this. If so, what that suggests.

Mr. **Ruder**. I can tell you that we have, as you know, a vigorous and continual enforcement program, and there is at least one case that I know of that has gone forward.

Senator **Riegle**. All right. The other question is this and I posed this before and we didn't get a chance to get an answer. That is, can you list for us any administrative steps or changes that the SEC has taken since the crash? In other words, any changes in the standard mechanisms that you have in place to monitor the system, discipline the system, deal with the system, quite separate and apart from the investigative effort. Have there been any specific administrative changes put in place since the crash?

Mr. RUDER. You again should recognize that the Division of Market Regulation, which is primarily responsible for this has been doing a study and you should recognize additionally that the Commission itself has been waiting for the study before it initiates administrative action. But I can tell you that we have approved the New York Stock Exchange rule which takes the cap off of fines for its members so that it is in the position to fine members, particularly specialists who are not acting in accordance with their rules. We have given temporary approval to a portion of an NASD rulemaking proposal which seeks to improve their automated execution system, and we are reviewing their proposal. As I've indicated, our staff has now over the past week at least made contact with the various exchanges so that we can initiate dialogue with regard to the special recommendations made in our staff study.

Senator RIEGLE. But that would be it then? That completes the list? There have been no others?

Mr. RUDER. You should also understand that the Division of Market Regulation proceeds by what we call delegated authority. The Commission does not review every rule-making decision made by that division. So I may not be completely aware of all of the rules or changes which were made.

My division director tells me that we have a New York Stock Exchange rule change which permitted—we did this temporarily in the market crash—permitted Merrill Lynch to obtain the—that may not be the exact word—but one of the specialists and we have decided to look at our rule 10(b)(18) which was the rule which was in place which affected purchases by issuers of their own securities.

Senator RIEGLE. Finally, are we then to suspect that now that you've got this full study completed and that you're going to digest it internally that we may be seeing other administrative actions by the SEC within the next short period of time or do you not contemplate that?

Mr. RUDER. Yes, that's what I've testified here this morning, that we will begin active implementation and discussions regarding the recommendations that are in the staff study.

The CHAIRMAN. Senator D'Amato.

Senator D'AMATO. Thank you, Mr. Chairman.

TRADING PRACTICES AND MARKET DECLINE

Chairman Ruder, it's good to see you. Mr. Chairman, the Brady Commission report identified several trading practices most frequently cited by market professionals as contributing factors to the depth and the rapidity of the market decline.

Some of those included portfolio insurance, stock index, arbitrage and program trading.

Let me ask you first, do you agree with the assessment of these market professionals that these practices exacerbated this market decline?

Mr. RUDER. Our staff conclusion and I think agreed to by the Commission is that portfolio trading, whether you call it index arbitrage or portfolio insurance, had a significant effect on the market during the 19th and 20th particularly and indeed during the close on the 16th of October.

Senator D'AMATO. Index arbitrage and program trading?

Mr. RUDER. The program trading should be understood to mean the sale of large portfolios of securities. The statistics which we have—and there are some charts in our staff study—that indicate that during very crucial times during the market break there was on a 10-minute by 10-minute analysis a substantial portion of trading which occurred through a portfolio insurance which we think affected the market.

Senator D'AMATO. OK. Now are these practices legitimate and useful strategies or are they a form of market manipulation?

Mr. RUDER. Well, they are not market manipulations, sir. The futures and stock market interconnection is in normal times a very useful and productive device for our securities markets. It offers an opportunity for institutional investors to hedge their portfolios, to change the mix of their portfolios, and to engage in other strategies which they cannot easily engage in because of the fact that their portfolios are extremely large.

Senator D'AMATO. Well, what, if anything, would you recommend as it relates to the utilization of this system so as to limit the kind of drops you've seen or abuse that you may have seen, those which encompass two kinds—No. 1, John Q. Public and citizen who can't execute a sale and who has to trade behind; and No. 2, does this contribute, as it seems to have, the volatility of the market in that downward surge that would not take place if there were some opportunity to intervene; and what, if anything, are you looking at and do you have any recommendations even initially as it relates to this area of activity? Because let me say this, Mr. Chairman, with all due respect to you, if you don't and the marketplace doesn't come forth with some area in terms of looking to work out an orderly manner by which these transactions can be permitted but by which there is some mechanism to stop that roller coaster down when everybody hits that same button in terms of sell and billions and billions are sold at the same time, then I think those who have suggested more radical approaches and indeed the people who are suggesting congressional legislation and maybe the creation of a superagency, et cetera, then take the fore. So we are really going to be looking to you and to the marketplace itself.

Now what, if anything, have you discussed and are you undertaking and are you undertaking a review to deal with this problem?

Mr. RUDER. Let me respond in a somewhat complicated way, Senator. I think it's very important to understand that in 1988 we are looking at a securities market which has significantly changed its characteristics even within the last 5 years. Automation is here to stay, and automation will increase the complexity of our markets both nationally and internationally during the coming years.

The Securities and Exchange Commission unanimously believes that the first step that should be taken would be to make the interconnections between these markets more efficient so that we can give these markets a chance to operate efficiently. That's our first recommendation. We are recommending capacity increasing measures throughout the system. We are recommending coordination between the two markets.

We also recognize, however, that in unusual times there may be a need to develop mechanisms which will interfere with the high volatility and tremendous demand that takes place. I may say, speaking personally, that I think that those investors who believed that portfolio insurance was a viable strategy ought to review that belief. When every market participant with a large portfolio believes that he or she can be the first person to get out of the market and beat all the rest of the people out of the market and therefore escape the negative effects of a downturn, they are making a big mistake. The fact is that it's impossible for all large portfolios to sell in a market without causing tremendous problems, and I don't think there's any system in the world that we could create that would prevent a downturn in the market if we were to be put into an environment where all of the investors decided to sell at the same time.

If I could give you the statistic which just amazes me, it is that during a normal market time we have $4 billion market trading in a day. On our 600 million share days, we had $20 billion of transactions in the day, but our market ownership is $3 trillion. And if those holders of $3 trillion of securities all decide at the same time to sell their securities, there's nothing that can be done. The point is that, if they're rational, they will understand that they should not dump securities on the market; they should not attempt to get rid of their portfolios ahead of everyone else because it's simply not going to work.

Now I do think we should put some mechanisms in there to cause them to slow down, to stop and figure out what they're doing.

Senator D'AMATO. Mr. Chairman, my time has expired, but I think that the essence of it is that which you just closed on. It would appear that at some point there has to be some mechanism that will be available if those in the free marketplace choose to sell and you can say, well, it's a free marketplace and that's what makes it so stable, so secure, so successful, but there must be some mechanism at some point in time if everyone says, well, I want to be the first guy out and steps in and slows this process down. It's easier said than done. My time has expired, but I think we have to continue to explore that.

Mr. RUDER. Just one more comment. Kalo Hineman and I are personally going to get the self-regulatory organizations and sit them down at a table and say:

> This is your problem. This is a unified market problem and we want the exchanges which are primarily responsible for this problem to give us their suggestions about how they will solve the problem.

And whatever powers that I have and I hope Kalo will agree, whatever powers he has will be exercised in order to promote the kind of agreement which is necessary to give the public an understanding that there will be some mechanisms in place.

Senator D'AMATO. Very good. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Dodd.

Senator DODD. Thank you, Mr. Chairman.

Again, Chairman Ruder, I apologize for missing the earlier part of your testimony but we have INF hearings and polygraph markups and the like, so it's a busy day for many of us here.

DROP IN CONFIDENCE

Let me just address a couple of questions if I can to you. Last fall there were widespread reports that a number of companies had suspended their initial public offerings as a result of the drop in investor confidence following the crash. We now have some overall numbers showing the amount of capital raised that sank to $2.4 billion in the fourth quarter. That was a drop from the third quarter of $6.7 billion. In fact, just looking at the months of November and December, a meager $864.5 million was raised. I don't have the numbers for September and October, but it would clearly show that there was a drop in confidence.

Obviously, that's a concern to every one of us here and to others as well, that the crash in fact did undermine some fundamental capital formation or undermine the fundamental capital formation purpose of the market.

I wonder if you might share—Mr. Chairman, if it's appropriate, I have them here with me, include those numbers for the record—but I wonder if you might share with us whether or not this trend has continued and is the SEC monitoring this and what must be done to improve those figures.

Mr. Ruder. The figures which I received from our Division of Corporation Finance confirm what you have just given me. I don't have the numbers, but I can tell you that during the last quarter there has been a substantial reduction in initial public offerings which are the fundamental capital-raising technique of business. We have not yet seen, as I understand it, an upturn in those numbers, but that's not unusual when you have had a market which has turned on the downward side. We find over the years that there is kind of a wave effect in terms of the times in which companies are willing to come to the market for money. This is a situation in which there's still, as you know, a great deal of uncertainty, and until that uncertainty is dissipated, we can expect, I think, the level of initial financings to be at a decreased level.

Senator Dodd. But you are monitoring this at the SEC?

Mr. Ruder. Yes.

Senator Dodd. Could you, to the extent you can, at least for the months of January—do you have to wait until the end of the quarter before you can get those numbers? Is it possible for you to get them on a more proximate basis of time?

Mr. Ruder. I think those numbers can be available on a monthly basis.

Senator Dodd. It might be helpful to track that a little more closely.

Mr. Ruder. I will ask our Division of Corporation Finance to give us those numbers for November, December, and January, and perhaps some comparisons for the months prior as well, so that you can have some idea of what has happened.

Senator Dodd. That would be helpful. And can you give us any suggestions or did I understand you to say almost implicitly that you just have to weather this thing, or are there some things that can be done to improve those figures if in fact that trend is continuing?

Mr. **Ruder**. We have not been in the business of either encouraging or discouraging financings. I think that the best thing that we can do is to take the steps that we are planning to take to strengthen public confidence in the market so that the firms that want to go to the market will have greater confidence themselves that they will be able to sell into that market at the prices they wish.

Senator **Dodd**. That would be helpful. The Brady Commission report and the SEC study—by the way, let me commend you and the SEC for that report. I understand there was some criticism earlier. Normally the criticism we get is we don't get enough action or activity out of these things.

Mr. **Ruder**. Could I just take a minute of your time to say that the staff produced a 5 lb. 9½ oz. report in 3 months, and that was a premature report. I don't know what they would have done if they had had 9 months.

Senator **Dodd**. I agree. [Laughter.]

I think it's an excellent job, given the nature and the difficulty and the significance of it. Instead of just weighing it, people might try reading it and they might discover that there's a lot more bulk to it than just its weight. It makes some excellent suggestions and does a thorough job of analyzing the problem and you are to be commended for that.

At any rate, both the Brady report and the SEC report point to various types of program trading as major factors in the market break. The CFTC testimony tends to downplay that significance. On page 17 of Mr. Hineman's testimony he states, "In sum, the stock market on October 19 did not fall due to continuous interaction between index arbitrage and portfolio insurance selling."

Your testimony points to a number of factors leading to the precipitous decline in the market. I wonder if you could discuss the precise role—I know you addressed in part in some of the other questions the issue of computerized trading strategies, but what was the precise role of computerized trading strategies, in your opinion? If there had been no market in stock index futures, how might things have been different?

Mr. **Ruder**. Well, I'm very hesitant to answer a "what if" question. I can only tell you that there were significant amounts of what we call portfolio or program selling during important periods of the market break. In our report we have some charts which indicate the total program selling on the New York Stock Exchange as a percentage of volume in S&P stocks in 10-minute intervals. I can show you this chart here which indicates that at times during the market break the percentage of program selling in 10-minute intervals was more than 60 percent of total New York Stock Exchange volume, and that the times when program selling peaked by and large during the 3 days that we've analyzed, the 16th, the 19th, and the 20th, tended to coincide with market downturns.

I don't say that in any pejorative way, sir. I merely say that it is something we have observed and it is something one needs to be quite concerned about.

Senator **Dodd**. And it is a fact.

Mr. **Ruder**. I believe it to be a fact, but I think one has to bear in mind that the market was, in the opinion of most people, in an overbought situation and we had a series of economic news which, joined together, caused the market participants as a whole to believe that selling was important. The problem that we are facing is the fact that we had a compression of this selling activity and a drop in the market of 500 points in a very short period of time. It's that compression and volatility that we need to look at as the important problem. There's no way in which we're going to sit here today and say we only want the market to go up.

Senator **Dodd**. Just concluding here then, you would agree, as I understand it, with Chairman Greenspan yesterday, that this wasn't a question of if it was going to happen, but when it was going to happen.

Mr. **Ruder**. That's my opinion, that it was going to happen. The question of at what level it was reached is another matter.

Senator **Dodd**. Thank you very much.

The **Chairman**. Senator Graham.

AMERICAN ECONOMIC SOVEREIGNTY IN A GLOBAL MARKETPLACE

Senator **Graham**. Mr. Chairman, I'm interested in the issue of American economic sovereignty in a global marketplace. I believe it's fair to say that there has been a greater history and tradition of collaboration among central bank officials than has existed among the national securities regulatory officials.

What do you think ought to be the path of our relationships with the other major economic nations in terms of closer coordination of the international dimensions of the securities markets?

Mr. **Ruder**. I will agree with you that the banking regulators have been much more closely interconnected than the securities regulators. Within the last 3 years, the Organization of Securities Commissioners, an international organization, has been substantially strengthened so that it now is a true worldwide organization of securities regulators.

We are active participants in that organization both at the high levels and in some working groups in which we are trying to achieve interaction.

Additionally, I personally from the time I came into office believed that it was important that we establish direct ties with the major markets. I plan a trip next week beginning on February 14 to Japan to meet with the major regulators in Japan. I am planning a trip in early March to go to London to meet with the major regulators in London, and I intend to establish and to build on already established ties which will allow us to have the kind of coordinated regulation that I think is important.

Senator **Graham**. What would you see as the priority agenda items for international cooperation among securities regulators?

Mr. **Ruder**. The first priority agenda item from my point of view is clearance and settlement. We need to be sure that international transactions can be cleared and settled and that payments can be made in a way so that the markets can be better interlinked.

I think a second question which needs to be pursued is the question of worldwide capital availability and the interaction between the marketplaces.

Other important areas are disclosure and enforcement. We are working on all these fronts to try to achieve cooperation.

Senator **Graham**. There's been concern that if the United States increases its regulatory or statutory constraints on our securities market that we will have the effect of driving business offshore.

I would be interested in your comments about that and what you think should be the perimeters of our concern relative to domestic action which could have that effect of dislodging activity to other countries.

Mr. **Ruder**. During August 1987 our staff produced a 500-page report or so on the internationalization of securities markets. I think that the lessons to be drawn from reading that are really twofold. One is that we should look carefully at our own system to see what changes we can make in order to accommodate the interests of foreign investors in order to make our markets more accessible to them. At the same time, I think it's necessary that we stand fast with regard to the important and indispensable aspects of our regulation, including the aspects which are designed to protect investors, customers, and preserve the integrity of the markets, including insider trading and manipulation questions, disclosure questions and others.

It's a very difficult matter as to how to balance these two—how much to give up and how much to remain fast.

I will be telling the regulators of the world that they should look to us as the strongest marketplace in the world and that the reason that we're strong is because we've had effective regulation. If they want strong marketplaces, the way to get them is to follow our example. I hope I will be persuasive with them in that regard.

Senator **Graham**. As we consider specific proposals from your report, Senator Brady's report and others, I would appreciate your continued comments as to how you feel those specific proposals may affect our global position. Are we going too far and incurring some possibly unintended negative consequences or are we strengthening America's position as the premier securities market?

Mr. **Ruder**. Well, I will do so, and I share concerns that have been expressed here and elsewhere that if we impose regulations which are too restrictive on our joint markets we will unnecessarily move at least our futures trading and possibly our portfolio trading overseas. I do not think that would be a beneficial result for the United States.

Senator **Graham**. Thank you, Mr. Chairman.

The **Chairman**. Thank you. I think we can go on to the next witness.

Senator **Dodd**. Well, Mr. Chairman, just on that last point, because I raised this yesterday——

The **Chairman**. Well, I have a question before that.

Senator **Dodd**. I'm sorry. I thought you were quitting.

The **Chairman**. I have one final question I'm going to ask and, believe me, this is my final question but I think it's very, very important.

IRRECONCILABLE DIFFERENCES BETWEEN AGENCIES

Chairman Ruder, you stressed the need for improved coordination between the SEC and the CFTC. Then you said something else. You said:

> The Commission believes that attempted coordination or regulation with respect to equity-related products may produce irreconcilable disagreements and that measures to resolve these disagreements between the Commission and the CFTC must be created by new legislation.

Then at another point I got the impression that you said that when there are irreconcilable differences the SEC must prevail.

Mr. **Ruder**. Correct.

The **Chairman**. In other words, if there were a meeting of the CFTC and the Fed or whatever and the SEC, that if you felt there were irreconcilable differences, your position would have to prevail. Is that right?

Mr. **Ruder**. That is true with regard to equity-related products.

The **Chairman**. Well, in other words, in a big sense, rather than have the Federal Reserve as the overarching regulator, it would be the SEC?

Mr. **Ruder**. We are the agency that knows about the securities markets. We are the agency which has the longest history in this area, and with our expertise, which includes I may say expertise in the futures area, I think that we can resolve those areas of dispute in a way which would be beneficial for the Nation. I do not in that sense think that it's entirely necessary that we have total regulation over the whole market, although we advocate that.

The **Chairman**. Well, I think you make a good point and I think there's no question of the fact you've got to resolve these things. If it's always resolved by a two-to-one vote, that may not be satisfactory. You want to hold a particular agency responsible. I think we have to do that. The important thing is that we have one agency that has that kind of authority and power.

Mr. **Ruder**. My view is that we are quite capable of doing that and would be willing to do it in a judicious way.

The **Chairman**. Good. I'm sorry, Chris. Go right ahead. I didn't mean to interrupt you.

Senator **Dodd**. Thank you. Just on that point that Senator Graham raised, the last point, in fact it came up yesterday with Chairman Greenspan, and he suggested that I raise this with you in a sense, but the whole notion of the globalization of these markets. Obviously, what happened on October 19 was not isolated. The same reaction to a lesser degree occurred elsewhere in the world and now it seems to me there are two choices—not necessarily clear choices and not only two—but one is not to discourage investor activity here or encourage offshore investor activity through an onerous regulatory system. That's one concern, and I think a legitimate concern.

A second approach, of course, is to try and see if you cannot achieve some sort of international framework here so that there's some sort of interchange or basic set of rules by which the international community will function under. And I was curious to the extent that you consult or the agency consults or has an ongoing or close relationship with international markets, how much information sharing is there? How much of an effort is there to share information about activities such as we saw on the 19th or activities leading up to it, and how wise is it to proceed and is it realistic to do so, or is that just sort of pie in the sky?

Mr. **Ruder**. I don't think wise is the right question. We must go forward with international cooperation. These markets are going to increase. We're watching the Japanese market as it begins to grow. They are about to enter into development of a futures market. The London market, as you know, deregulated and has entered into a very competitive situation.

At the current time, we are the market leader. There's no mistake about that. But I think it's important that we cooperate with those markets both in terms of knowing what they're doing and sharing information.

But I see another important matter to be dealt with, and that is that internationalization is going to work both ways. Our markets and their markets will become intertwined, and, again, it's the same as with automation. This boat has sailed.

Senator **Dodd**. What is being done about it? I've heard everybody say the same thing, and if it's not a question of whether or not it's pie in the sky or realistic or wise, it's something that must happen, to use your own words, or has to happen, what are you doing about it?

Mr. **Ruder**. We have exchanged what we call memoranda of understanding with a number of countries with regard to obtaining enforcement information from them, a very important part of our market surveillance area.

We are currently involved in looking at the disclosure area, both with regard to whether or not we can develop auditing standards which can be acceptable in all countries and whether or not we can have a disclosure system which incorporates reconcilable GAAP standards. We are encouraging foreign countries to develop laws with regard to insider trading and manipulation, and we are beginning in as broad a way as I can, given the time constraints, to try to meet at the highest regulatory level to talk about market structure problems.

Senator **Dodd**. What is the reception to those suggestions? What sort of reception are you getting to those ideas?

Mr. **Ruder**. There's a willingness to cooperate. There are really practical difficulties in getting other countries to accept our standards, and that is part of the problem that we have. Our disclosure standards are much higher than many countries, not all, but many countries. I think in the enforcement area we are going to receive, and we are receiving, very strong cooperation. Everyone wants a nonmanipulated market.

The clearance and settlement system is another area. When I'm going over to London in early March, I'm going over there to participate in a conference on clearance and settlement as part of my trip. I think it is an area in which, again, we will increase the system so that the markets can interact well and we can have the kind of international capital markets which will be important for us.

Senator **Dodd**. Well, I'm glad to hear you get very specific. You're one of the first persons to get very specific about some very specific things that you're moving on.

I think it important, Mr. Chairman, that we keep abreast of that. It seems to me that's a very wise way to proceed and I'll use my own words earlier, whether it's wise or not, in the long run, and to avoid what some have called a competition in laxity which is a potential problem in this entire area. I would be very interested in having at some point maybe—whether it's an informal discussion—we don't have to make it a hearing, but what we might do to help you encourage additional action and cooperation in those areas. I think it has got to be a greater effort sooner rather than later in those particular questions.

I have another question, Mr. Chairman, on the naked foot, but given the complicated nature of that—there was an article in the Wall Street Journal going back in December by Scott McMurray and Jeff Bailey that raises some questions about the small investor. I will submit that to you and ask that that article be included in the record.

The **Chairman**. Thank you, Senator Dodd.

Thank you very, very much, Chairman Ruder, for your excellent testimony. We very much appreciate it.

Our next witness is Mr. Hineman. Mr. Hineman is the Chairman of the Commodity Futures Trading Commission.

I am delighted to have Mr. Hineman with us.

Mr. Hineman, you are a very patient man, and I apologize for having kept you waiting so long.

Mr. **Hineman**. No problem, Mr. Chairman.

The **Chairman**. Go right ahead with your statement.

STATEMENT OF KALO HINEMAN, ACTING CHAIRMAN, COMMODITY FUTURES TRADING COMMISSION, WASHINGTON, DC

Mr. **Hineman**. Mr. Chairman, members of the committee.

Thank you for the opportunity to participate in these hearings. I would like to go to a preliminary statement, which is a response to some of Chairman Ruder's comments, first. And I would like to take about 2 minutes before turning to the prepared testimony, to make this response.

I appreciate Chairman Ruder's taking me into his confidence concerning the SEC's report by briefing me this Monday, and I appreciate the close cooperation that the Chairman and his staff extended to me and the CFTC staff during the days of the market crisis and the days thereafter.

Further, I look forward to continued coordination with the SEC, as with the other government agencies charged with overseeing the other cash markets on which futures contracts trade; however, effective cooperation cannot take place, where one participant can always dictate the ultimate outcome.

SUPPORT FOR RECOMMENDATIONS

The CFTC supports the recommendations of the Brady Commission and the GAO, both of which envision a coordinated approach to the important intermarket issues before us, an approach in which the SEC and the CFTC are equal partners. Indeed, both of the impartial reports commend the CFTC's performance and expertise. In this respect, as Chairman Ruder has made clear to this committee during its consideration of Glass-Steagall reform, I believe in functional regulation.

Moreover, I cannot agree with some of the SEC's recommendations on intermarket issues, such as imposing hedge margins which could undercut the economic purpose of stock index futures markets.

The CFTC has serious concerns with regulatory changes that would fundamentally alter an effective, efficient marketplace that serves an important economic function and performed relatively well throughout the period of unprecedented stress.

In fact, I think it would be accurate to say that the marketplace performed extremely well.

The CFTC has produced four reports. I think that might have been partly to save my bad back, because if we had all four of these combined into one, I suspect it might weigh in with the SEC report. There is a lot of material in these reports, and I want to give thanks to my staff who did the major work on this, and I will tell you that this was done by 25 staff people. My hat's off to them. I don't know for sure how they did it, but they did. One thing they had was good information.

The CFTC has produced four reports dealing with the October market events. I undertand that copies of the final staff report have not been provided to the committee members. We will correct that just as soon as possible. I thought you had these final copies.

Senator DIXON. I think I have a copy.

Mr. HINEMAN. I'm talking about the copies of the report, the final report. And I don't believe that you have them, but you will have them as soon as we can get another run made, which will be very shortly.

We also have a longer written statement to be submitted for the record, and I would like this longer statement to be submitted for the hearing record.

In my oral statement, I will touch upon some of the conclusions and recommendations supported by the extensive data and analysis in these other documents.

In reviewing the October market break and some of the responses to it, I am reminded if H.L. Mencken's statement, "There is always an easy solution to every human problem that is neat, plausible, and wrong."

I know this committee will be under a lot of pressure to accede to popular misconceptions, to ignore the data and find a plausible "villain." I would only urge that in making changes—and I certainly do believe that some changes are necessary—we must analyze the data, identify the real problems and seek carefully reasoned solutions, targeted to very specific goals.

Turning to the data, one striking fact that emerges is that the Futures Exchanges' financial and operational systems performed remarkably well under very difficult circumstances.

"CASCADE" THEORY

Another significant fact involves the "cascade" theory, which suggests that short portfolio hedging and stock market-futures market arbitrage can interact to cause a downward spiral in stock prices. This is a neat, plausible sounding theory, subject to only one slight problem—it doesn't match the facts. Based on data the CFTC has amassed from firms holding large stock index futures positions around October 19, the trading patterns which actually occurred at that time do not correspond with those that would have to happen to support this theory. In fact, some of the market activity was exactly the opposite of what the cascade theory suggests.

I think at this point, I need to make one additional clarification. There have been a lot of questions asked here about the difference in the data that we submitted, or the conclusions from the data—the difference in analysis of the data by the SEC and CFTC. I don't think there is really that much difference—I think there is agreement among our researchers as to what the data really says. I think one misconception here is that in our data we were dealing just with trading done on the futures exchanges.

The issue involves defining "program trading." Some of it is done—portfolio insurance. For example—on the futures exchanges, but a lot of it is done, and during this timeframe was done, on the stock exchange. We don't have a handle on those numbers. Thus, the reports speak of one large entity that did the lion's share of "program trading" on the 19th. That was not done in the futures market. It involved selling on the stock exchange.

So I think there needs to be a further analysis of the data and perhaps a better definition of program trading. A lot of people, when they say "program trading," mean index arbitrage. But for all practical purposes, late in the day on Monday, and all day on Tuesday, index arbitrage was virtually nonexistent because the plug had been pulled on the DOT system.

So I think we have a definitional problem that needs to be settled, so that people understand what we're talking about. There's not that much disagreement between the staffs of the SEC and the CFTC, but I think there is an enormous perception of differences that is emerging in the public sector, and I think that needs to be corrected.

To continue with my prepared statement, no one at the CFTC thinks that things are the same now as they were before October 19 and 20. The CFTC's regulatory systems and our coordination with the exchanges and other agencies worked well, but any shock such as that of October 19 will disclose areas where systems can be improved.

Our written statement describes the regulatory enhancements the Commission is considering and the increased coordination efforts we have undertaken since October.

We agree with the GAO that neither a merger of agencies nor reallocating jurisdiction over stock index futures is an effective means of addressing the market problems uncovered in October. The current system has worked well—two independent, professional regulators, responsible for two different types of markets which are linked economically but have fundamentally different functions and purposes.

As the Brady report suggests, the answer lies in better coordination in those few critical areas where these two markets particularly overlap. We overlap in a very small number of issues with the SEC, just as we overlap with every regulator that regulates a cash market with respect to which futures contracts are traded. This is not a different kind of a task for us, when we talk about coordination between market regulators, and it is one that is subject to a workable solution.

While more vigorous and immediate efforts at coordination are clearly desirable, I do not see a need to grant intermarket power to a single agency. I believe it is those closest to the problem, the Federal regulatory agencies, the exchange self-regulators and the market users directly involved, who can and should resolve these issues.

I would not forget to include those market users, when we try to make these kinds of decisions.

The GAO has recommended immediate action among federal regulators, in consultation with the markets, to formulate intermarket, interagency contingency plans. I think these agencies and the exchanges should make an immediate start down the road recommended by GAO. I pledge the CFTC's full support to such efforts, and I urge this committee to get behind it too. I believe this is the truly responsible way to address the October market events.

The unification of clearing systems across markets is a more complex issue. Without question, the sharing of clearing information across market lines is absolutely essential, and we've already made a lot of strides in that area in the futures markets, and some coordination across markets is in the discussion stage.

In my view, the most dangerous day we faced was not Black Monday but what has become known as Terrible Tuesday, October 20, when there was a lack of timely and reliable information about where the credit was in the system. You can phrase that just as easily, where the money was in the system. I prefer to think in terms of where the credit was in the system, because if somebody owes me money, I'd sure like to know who it is.

So lack of information about where the credit was in the system could have precipitated a financial gridlock. A common clearing system is not required to accomplish this information sharing, and in fact, could bring additional concentration of systemwide risk.

The Chicago Board of Trade and the Chicago Mercantile Exchange were working on a computerized financial information sharing system prior to October 19. Since that time, the system has been put into operation and the Options Clearing Corporation that clears for CBOE and AMEX, or in other words clears for the securities options exchanges, should be plugged into the system by the end of February. We need now to go ahead and get the stock exchanges on board, and in fact, I understand that there has been a lot of discussion in this area already.

So there, I think, is one of the two major issues that we're talking about, and it's not going to take very long to go ahead and reconcile that issue, in my view.

The second issue is whether current margin systems give futures traders significantly different leverage than stock traders. At this point, I don't think we can answer that question, because there seems to be a great deal of confusion about what margins are actually being paid in the stock market—who pays what. I kept hearing that stock margins were 50 percent, and then the Brady Commission reported that stock market professionals pay 20 to 25 percent or less. I think more investigation is needed to find out who pays and how much. Until we get to that point, I think we're not dealing with the kind of information that we need to make reasoned decisions.

Finally, the Commission is generally very sympathetic to the idea of "circuit breaker mechanisms" to protect the market system from a repeat of October 19. I believe that price limits, which futures exchanges now have in place, can be a workable circuit breaker. If circuit breakers are going to work, however, they must be very specific, targeted to remedy a particular recognized problem. They should be made known well ahead of time, so market participants will know what to expect.

Most importantly, they must be coordinated so they work in synchronization and do not allow one market to continue to trade at a time when the circuit breaker has closed the other market. This was also a fundamental premise of the Brady report. I do not believe the futures and stock exchange efforts in this area to date are adequately coordinated. I think that fixing this problem should be agenda item number one in the interagency, interexchange contingency planning meetings the GAO recommended.

If the overriding concern is to prevent a repeat of the kind of market drop we saw on October 19, the one way I know to assure this is to institute price limits, coordinated across markets. Such limits cannot change the economic fundamentals that determine the market's ultimate destination, but they can prevent a 500 point drop in one day and give people a chance to stop and think.

Mr. Chairman, I would ask again that the Commodity Futures Trading Commission final report on the events of October 19th, as well as the Commission's report on the futures markets' financial systems be submitted for the record.

Thank you for the opportunity to address these important issues. I would be happy to answer any questions the committee members might have.

[The complete prepared statement of Kalo A. Hineman follows:]

TESTIMONY OF
KALO A. HINEMAN
ACTING CHAIRMAN
COMMODITY FUTURES TRADING COMMISSION
before the
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
February 3, 1988

Mr. Chairman, Members of the Committee:

Thank you for the opportunity you have afforded the Commission to participate in the Committee's examination of the events in the securities markets during October 1987. Numerous studies and analyses have and will be done; likely, several congressional committees will hold hearings such as this one. From the mass of data, opinion, and analyses will flow decisions and public policy choices. Whether the events were the result of macro-economic factors or the activities of a few traders, whether the organizations involved acted and reacted appropriately, and whether changes or refinements in trading and regulatory systems may be necessary, must be determined by examining data and information that may be susceptible to more than one interpretation.

One fact, however, remains clear: the mechanisms in place in October enabled the markets to withstand a tremendous sentiment to sell securities. While I do not wish to criticize those who draw attention to the serious nature of the events of October 19 by use of words such as "melt-down" or "crash," I would note a limitation on these metaphors. They both imply destruction and ruin. This is not the case with the institutions presently under scrutiny. The exchanges, clearinghouses, major participants, and banks involved were open for business the following day--strained, tired and nervous, but open nevertheless.

I am not suggesting perfection in the futures system, nor am I saying we are satisfied with the status quo. No one at the CFTC believes things are the same as they were before October 19. However, in considering modifications to the current system, we must be careful to avoid change for the sake of change. Needed are well-thought-out solutions targeted to very specific goals. Changes should be improvements, and we should be sure that an improvement to one part of the system will not adversely affect other parts.

OCTOBER 1987: AN OVERVIEW

AGENCY AND SELF-REGULATORY ORGANIZATION ACTION

The Commission has thoroughly reviewed the October market decline and has issued four reports, copies of which have been furnished to the Committee: (1) an interim report on stock index futures and cash market activity during that period; (2) a follow-up report that addresses the financial performance of the futures markets clearing systems, capital and segregation compliance by FCMs and other financial oversight issues; (3) a report on trading in the Chicago Board of Trade's (CBT) Major Market Index (MMI) contract on October 20, in which the Commission reviewed allegations of manipulation of the MMI contract and found no indication of such activity; (4) a final report on stock index futures and cash market activity during October 1987, completed on January 29.

After this extensive review of the historic market decline of October 1987, the Commission has concluded that CFTC and self-regulatory safeguards in place for the futures markets worked effectively. No futures brokerage firms (FCMs) failed due to futures market problems and no customer money was lost due to an FCM's failure. On October 19 alone, more than $2.5 billion in variation margin was collected on an overnight and intra-day basis. Futures clearing mechanisms operated effectively despite record volumes, price swings and margin flows. Although decreases in trading activity occurred on the Chicago Mercantile Exchange (CME), a significant number of CME members remained on the exchange floor to execute customer orders in the S&P 500 futures contract throughout the most critical days, 553 members on October 16, 526 on October 19 and 438 on October 20. No futures market had to be closed because of financial or margin collection problems.

The fact that the futures markets stood up to the market crisis remarkably well is testament both to the existing structure of the Commodity Exchange Act ("Act" or "CEA") and Commission regulations (described in detail in the Appendix), of which the centerpiece is vigorous industry self-regulation coupled with active Commission oversight, and to the channels of communication which the Commission has maintained with other agencies and the futures exchanges.

Commission Communication and Cooperation With Exchanges and Other Agencies

During mid-October, effective inter-agency lines of communication were used extensively. The Commission coordinated with

the futures exchanges and clearing organizations, the securities exchanges, the SEC, the Federal Reserve Board and other federal agencies having an interest in the financial markets.

Communication with Exchanges

On October 19, I discussed the market situation with Leo Melamed, Chairman of the Executive Committee of the CME, and was informed that the CME had been in contact with New York Stock Exchange (NYSE) Chairman John Phelan and that the two exchanges were in frequent communication and had agreed to cooperate in addressing the unprecedented volatility in the market. Mr. Melamed also stated that margin calls on the CME were being met.

On that day and throughout the remainder of that week, CFTC Commissioners and staff at various levels were in constant contact with the leadership and staff of the four exchanges that trade stock index futures--the CME, the Chicago Board of Trade (CBT), the Kansas City Board of Trade (KCBT), and the New York Futures Exchange (NYFE)--the clearing organizations of those exchanges, and the other futures exchanges and their clearing organizations. These contacts, together with other direct monitoring activities and data collected by the Commission, confirmed that each exchange was maintaining an affirmative financial and market surveillance program as required by the CEA and CFTC regulations, that the financial integrity of the exchange clearing systems was intact and that continuing coordination between the futures exchanges and the NYSE was being maintained. CFTC staff were also in close contact with the staff of the National Futures Association (NFA).

Throughout the week of October 19-23, CFTC staff members were also in frequent contact with financial surveillance staff of the NYSE, the Chicago Board Options Exchange (CBOE), the Intermarket Clearing Corporation (ICC) and the Options Clearing Corporation (OCC) in order to monitor the continued financial integrity of related market systems.

Since October, the Commission has encouraged enhanced coordination between the futures and securities exchanges. For example, on January 13, I went to Chicago to discuss financial market issues, including enhanced coordination with the securities markets, with the leadership of the CBT and CME. On January 21, I went to New York to discuss the same issues with the President of NYFE, the NYSE Vice President for Capital Markets and the Chairman of the Futures Industry Association (FIA).

I also recently urged the Intermarket Surveillance Group ("ISG") to consider, and the SEC to support, the inclusion of futures exchanges in ISG deliberations through formal membership or other means. As this Committee is aware, the ISG is composed of representatives of several securities exchanges (see the Appendix) and is responsible for coordinating industry-wide securities exchange surveillance data. The Commission believes that the important coordinating function served by the ISG could be expanded to foster surveillance coordination between securities and futures exchanges and to improve exchange surveillance data systems for monitoring intermarket trading.

Communication With Other Agencies

As set forth in more detail in the Appendix, over the past six years the CFTC has developed and maintained effective communication with other Federal agencies involved with the regulation of financial markets and institutions. These existing relationships enabled the regulators to coordinate their actions effectively during October and to relay critical information to affected exchanges. Throughout the week of October 19-23, I maintained daily contact with Chairman Ruder of the SEC to coordinate regulatory analyses and viewpoints. The Commission's staff also maintained frequent contact with their SEC counterparts to monitor the financial condition of member firms of both securities and futures exchanges and to keep apprised of exchange self-regulatory actions. For example, on the afternoon of Monday, October 19, during the most precipitous market drop, the CFTC Commissioners and staff met in a closed market surveillance briefing which I had scheduled the previous Friday because of the volatility experienced during the preceding week. SEC staff had been invited and were present at this meeting. After the meeting, the CFTC and SEC staffs immediately began planning a joint call for additional data to provide more detailed information on these market events. The results of that survey are included in the reports recently issued by both agencies.

I, or other Commissioners, also maintained daily contact with the Chairman and other members of the Federal Reserve Board to keep them informed of the current situation. Commission staff kept Federal Reserve staff in Washington and the Federal Reserve Bank of New York notified of ongoing market events and the financial condition of the futures market system. Updates also were provided to the Department of Treasury.

The communication and cooperation among these regulatory authorities were extensive during this critical period, and we have taken steps to solidify further these relationships. Since that week, I and CFTC senior staff have met twice with Chairman Ruder and SEC senior staff to discuss improved inter-agency liaison and crisis management; key senior staff members of the two agencies also have increased the frequency of their periodic meetings to discuss matters of mutual interest. On another occasion, I met individually with Mr. Ruder to discuss further interagency coordination and, on January 8, I met with Federal Reserve Board of Governors Chairman Greenspan on this same issue. Our discussions have centered upon establishing a more structured and routine system to assure proper coordination in critical situations and generally to keep each other apprised of legal, economic and regulatory developments.

These meetings are only early steps on a long road, but I believe it is the right road. Efforts to enhance coordination on those few issues that have impact across markets should involve the exchanges and the market participants, as well as the expert regulatory agencies. Working together, we can resolve these issues, and I assure you the Commission is wholeheartedly committed to this effort.

Commission Oversight Activities During the Market Decline

During the October 19-23 period, the Commission intensified its financial, market and trade practice surveillance programs. In order to ensure the financial integrity of the markets, the Commission: identified and reviewed the activities of major market participants and firms likely to be at risk of margin default or financial deterioration; performed on-site visits to those firms as warranted; checked FCM compliance with segregation of customer funds and minimum capital requirements, and dealt with deficiencies that occurred; monitored the collection of daily and intra-day margin calls at the futures clearing organizations; and reviewed the exchanges' financial audit and surveillance activities.

At the same time, the Commission, through its market surveillance program, monitored daily activities of large individual traders on the principal stock index futures and futures option markets, with emphasis on the high-volume CME S&P 500 futures contract. Our routine surveillance system provided extensive position data to the Commission on a daily basis from all exchanges, FCMs, clearing members and foreign brokers. For example, by mid-day Tuesday, October 20, Commission surveillance staff had received, for all stock index futures contracts, the gross positions and changes in the positions of all reportable traders for October 19.

Beginning on October 19, the Commission's regional staff substantially increased floor surveillance, maintaining virtually a continuous presence on the floors of the CME and CBT throughout the week. Also, the Commission's computer-assisted trade database and the exchanges' time-sequenced audit trail systems, established in 1987 under CFTC rules promulgated in 1986 (described in the Appendix), enabled Commission staff to evaluate large amounts of data on an expedited schedule. Indeed, the Commission's comprehensive information gathering system allowed it to produce an interim report on stock index futures activities on Monday, November 9, just three weeks after the market decline.

Industry Actions During The Market Decline

While the Commission was prepared to act immediately in the event of a futures firm failure, no such action was required. Exchange channels of communication as well as the CFTC's regulatory structure, including FCM capital and segregation requirements, exchange margin systems, exchange audit and surveillance systems, and clearing systems worked together effectively to prevent such a situation from occurring.

First, the futures exchanges were in frequent contact not only with each other but also with the Commission, the SEC, the Federal Reserve Board, and the New York Stock Exchange, although there was some apparent confusion about whether the NYSE would close on Tuesday, October 20.

Second, the vast majority of FCMs remained in compliance with CFTC capital and segregation requirements throughout the October 19-23 period, and the few firms which did experience

temporary difficulties quickly returned to compliance, usually within hours. As a result, the system maintained the safety of futures customer funds despite extremely volatile market conditions.

Third, the exchanges took expedited action to reinforce self-regulatory protections. In order to address the unusually wide price movements in stock index futures markets and equity markets during the week of October 19, the CME, CBT, NYFE, KCBT and ICC imposed temporary emergency rules with regard to stock index products. These actions included imposition of daily price limits, early closings consistent with the cash market, a brief trading halt and more stringent requirements for the granting of hedge or arbitrage exemptions from speculative position limits.

Fourth, the financial stability of futures firms must be credited in part to responsible and aggressive margin management by the futures clearing organizations. The "mark-to-market" system of futures margining provides for settling all losses and paying all profits on a daily basis so that before the following day's trading begins each clearing member neither owes nor is owed money because of the previous day's market moves (see Appendix). In response to the stock and stock index futures markets' high volatility and large price movements in mid-October, the exchanges that trade stock index futures raised initial and maintenance margin requirements for those and other contracts. For example, between October 19 and 29, the CME raised its margin requirements on the S&P 500 contract five times.

During this period, the futures clearing system also demonstrated its capacity to collect daily variation settlements of exceptional frequency and magnitude, with daily and intra-day margin settlements on the CME and CBT throughout the week of October 19-23 totalling nearly twice the number normally made in less volatile markets. Despite the increased volume, resulting in brief intra-day delays in isolated cases in the payment and collection of margin, the system worked as designed and as required. No clearing firm defaulted in the payment of futures margin.

Fifth, exchange surveillance and audit staffs took special steps in order to be able to detect potential problems. Market surveillance staffs monitored large trader data with particular emphasis on those traders adversely affected by price changes so that such traders and their carrying firms could be referred to the respective exchange's financial audit staff for further scrutiny.

Finally, the clearing organizations took special steps to facilitate matching and clearing of all trades. The exchange clearing systems successfully handled exceptionally high volumes of trades and margin calls during these critical days. With few exceptions, clearing firms were able to process orders with little or no disruption to their normal order routing and trade execution systems. The CME, although experiencing a higher than normal number of "out-trades" due to large volume and price volatility, was able to resolve the vast majority of these out-trades

by the opening of the following day's trading, using special trade checking sessions when necessary.

Commission Action Following the Market Break

The Commission took immediate action to assess the operation of CFTC and self-regulatory systems during October 1987, identify measures that could be taken to reinforce the capacity of existing systems to respond to extreme market volatility, and analyze the activities of major participants in the futures and stock markets during this period. An *Interim Report on Stock Index Futures and Cash Market Activity During October 1987* was prepared by the staff on an expedited basis and presented to the Commission on November 9, 1987. Subsequently, the Commission:

--developed additional data concerning the financial impact of October market events upon FCMs and futures customers through, among other actions, issuance of a special call for special financial reports by all FCMs, collection of survey data from 23 FCMs representing approximately two-thirds of total futures customer equities, and analysis of notices filed pursuant to the Commission's early warning reporting system;

--reviewed the operation of FCM and clearing organization systems for the collection of margin during the market break;

--surveyed exchanges, FCMs, the NFA and the Commission's Complaints Section for data concerning customer complaints relating to stock index futures activity during the market break;

--analyzed large trader activity in the futures markets, including the activities of major broker/dealers and institutional investors;

--performed a detailed statistical analysis of futures and stock market price relationships;

--examined the performance and floor activities of futures exchange members in handling and executing customer orders, market-making and trade practices; and

--initiated a review by futures SROs of potential program enhancements to reinforce existing financial protections in volatile markets recommending, among other things, that the SROs review the effectiveness of internal controls exercised by member firms over guaranteed floor trader accounts, and the SROs accelerate and enhance their information sharing efforts; recommended priority review by the futures SROs and accelerated implementation of outstanding recommendations on specified surveillance program areas; review the liquidity of capital available to clearing firms that are not FCMs, met with the Joint Audit Committee, on which all futures exchanges and the NFA are represented, to discuss the identified program areas; and monitored SRO responses, which were generally positive, to the Commission's recommendations.

Recommendations for Financial Safeguard Improvements

Our review of the market events indicates that the existing statutory framework enacted by Congress in the CEA and the regulatory mechanisms put into place by the CFTC worked effectively to protect the financial integrity of the futures market. Our review, however, has pinpointed a few key areas in which further improvement could be helpful. Briefly stated, the following are highlights of the recommendations made by Commission staff in its follow-up financial report:

1. That futures clearing organizations and their settlement banks review their contractual arrangements to assure that they adequately specify that settlement bank commitments to honor the pay and collect instruction of the clearing organizations are final and irrevocable;
2. That a procedure for expanding the availability of Fedwire hours during extreme, volatile market conditions be considered;
3. That measures be considered to enhance settlement banks' access to clearing firm customer financial data;
4. That clearing organizations consider routine use or increased use of intra-day margin pays and collects;

5. That FCMs review their margin and audit procedures to assure that they obtain adequate security from foreign-based customers;
6. That the exchanges consider measures to strengthen the protections afforded by the margin system against extreme price fluctuations, particularly with respect to concentrated positions; and
7. That self-regulatory organization information sharing programs be enhanced to encompass securities-related data, in particular the existing program to share pay and collect information concerning firms which are members of more than one futures exchange.

These recommendations are intended to focus the self-regulatory response to financial issues raised by the market decline. I now would like to address some other issues about which much has been written during the past three months.

PROGRAM TRADING

Program trading is a term that has been used in virtually every discussion of the events of October 19 with varying degrees of precision. Actually, program trading is an investment strategy in the stock market that predates stock index futures and options instruments. Today, program trading might refer to all trading techniques designed to buy or sell baskets of stock represented by an index, such as the Standard and Poor's 500 Stock Index. Two types of program trading have received particular attention:

> index arbitrage -- buying (or selling) futures contracts on equities indexes and selling (or buying) baskets of stock to take advantage of intermarket pricing differences;
>
> portfolio insurance -- the practice of decreasing (or increasing) a portfolio's exposure to the equity market, either through stock sales (or purchases) or the sale (or purchase) of futures contracts as stock prices decline (increase). The purpose is to decrease the loss in value of a portfolio in a declining cash market while retaining the opportunity to achieve gains in a rising equity market.

Another term often used is "computerized trading." This term can mean a transaction on the NYSE, buying or selling securities through the Designated Order Turnaround System (Super DOT) which can accommodate market orders of as many as 30,099 shares of a particular stock. The term can also refer to the use of computer technology to assist in making the numerous computations necessary to carry out intermarket arbitrage, portfolio insurance, or other complex trading strategies. We must remember, however, that humans make the trading decision; computers only enable fund managers to rapidly assess complex market relationships and to execute large trades more efficiently.

The Commission's Final Report on the October market events analyzes in detail various aspects of index arbitrage, portfolio insurance and other forms of portfolio hedging in order to determine what effect, if any, futures related activities had on the relationship between the futures and stock markets and whether these activities impeded the proper functioning of the markets.

The data and analysis in the report demonstrate that the prices determined in the S&P 500 futures pits through mid-day on October 19 appeared to be based on current information and reflected actual market evaluations of the supply-demand fundamentals that were present. After that time, the arbitrage link between futures markets and the stock markets was weakened, and large futures price discounts reflected that separation of the markets rather than stale stock prices.

The Final Report should be read in full for a complete understanding of the data; however, the following are some

highlights of the Commission's report on trading on October 19.

-- Index-arbitrage program stock sales, as reported in the SEC/CFTC survey of firms that have historically conducted the great majority of index arbitrage and portfolio insurance activity, accounted for about 6.2 percent of the 608 million shares sold on the New York Stock Exchange on October 19. During the first half hour of trading one mutual fund's orders alone were more than twice the size of the total index arbitrage and other program sell orders reported for that same half hour in the SEC/CFTC survey;

-- Reportedly in response to a large number of customer redemption requests that had built up over the weekend, that mutual fund sold about 25.8 million shares of stock on the NYSE on October 19.
Nearly 17.5 million of those shares were sold during the first half hour of trading and other sizeable sales were executed in London before U.S. markets opened on the 19th;

-- Record-high concentration of selling on the NYSE on October 19 occurred in the first two hours of trading, reflecting selling pressure that had been forming over the weekend and before. Those mutual fund transactions referred to above accounted for over 34 percent of NYSE volume during the first half hour of trading. Such orders appear to be the reflection of the decisions of thousands of individual investors to sell.

-- Total portfolio hedge selling in the S&P 500 futures accounted for approximately 20 percent of the selling in that contract on October 19;

-- All reported program stock sales in the SEC/CFTC survey accounted for less than 15% of the 608 million share volume of the NYSE on Oct. 19;

-- The SEC/CFTC intraday survey data appear to contradict any attempt to explain the October 19 market move with the "cascade" theory, which suggests that short portfolio hedging and stock/futures arbitrage can interact to cause a downward spiral in stock prices. The only interval during which both index arbitrage stock sell programs and portfolio insurance futures sales were simultaneously of substantial quantities was from 9:30 to 10:30 a.m. on October 19. During the next hour of trading, arbitrage sell programs were very light while portfolio insurance sales intensified -- both in the futures and the stock markets. The price of the S&P 500 December future trended upward from 10:30 to 11:30 a.m. and the reported large futures discount disappeared--exactly opposite of what the "cascade" theory would indicate.

-- Portfolio hedge sales of futures contracts were persistent throughout the day, but the highs and lows of that activity did not correspond with the periods of greatest weakness or recovery of futures prices;

-- After 10:00 a.m. on October 19, other stock sell programs unrelated to futures trading were larger in each succeeding half-hour interval than index arbitrage sell programs. For the day, such other reported program sales accounted for 52 million shares in comparison to 38 million shares for index arbitrage.

-- Despite the persistently large reported discounts of futures prices to stock index values after 2:00 p.m. on October 19, the magnitude of index arbitrage trades involving the S&P 500 future declined significantly, both in absolute terms and relative to NYSE volume;

-- On October 19, among those firms surveyed by the CFTC and SEC, nearly 40 million shares reported as program sales other than index arbitrage were executed in the stock market for portfolio insurance purposes rather than as hedge positions in the futures market.

In sum, the stock market on October 19 did not fall due to continuous interaction between index arbitrage and portfolio insurance selling. We have not found evidence that a particular trading strategy caused the October 19 market decline. In fact index arbitrage selling accounted for between 6 and 13 percent of total NYSE volume on October 14, 16 and 19, with the largest percentage reported on October 14. These amounts are less than reported for September 11 and 12, 1986, a period for which the SEC staff concluded that index arbitrage was not the cause of the magnitude of market declines for those days although such arbitrage may have condensed the period in which changed investor attitudes were reflected in the stock market.

THE BRADY REPORT

As I noted earlier, numerous studies are evaluating the October market experience. One of the most noteworthy to date is the Report of the Presidential Task Force on Market Mechanisms, known as the "Brady Report." The Commission is pleased to have this opportunity to share its views on the conclusions and recommendations of that report.

Based upon its analysis of the events of mid-October, the Brady Task Force recommended that:

* Because, from an economic viewpoint, the stock, stock index and options market constitute "one market", one agency should coordinate the few, but critical, regulatory issues which have an impact across the related market segments and throughout the financial system.

* Clearing systems should be unified to reduce financial risks.

* Margins for futures contracts and stock purchases should be "consistent."

* Circuit breaker mechanisms (such as price limits and coordinated trading halts) should be formulated and implemented to protect the market system.

* Information systems should be established to monitor transactions and conditions in related markets.

One Market

With respect to the Brady Report's "one market" concept, it has long been recognized that the stock index futures, stock and stock options markets are, from an economic viewpoint, closely related. Indeed, this principle holds true for every derivative market and its underlying cash market. Under normal circumstances, a properly designed futures contract and its cash market will move in tandem, remaining linked by common market participants and arbitrage. Thus, just as in the case of wheat, gold, or gasoline futures, the stock index futures markets are intended to, and in ordinary circumstances do, reflect the underlying cash (stock) market.

Although the stock index futures and stock markets are economically linked, it must be remembered that these markets, like all futures and cash markets, operate differently and perform different functions. The stock market is an acquisition market with a capital formation or investment purpose. The futures market is a market which allows participants to shift the risk of price moves. These differences in purpose, and the fundamental differences in the operation of these markets, have understandably generated different regulatory schemes.

One Coordinating Agency

The Commission endorses the notion of a coordinating group composed of existing governmental regulatory agencies, including the CFTC, the SEC, and the Federal Reserve Board. Indeed, steps have already been taken in this regard, as evidenced by meetings between myself, Chairman Greenspan, and Chairman Ruder.

Unified Clearing System

The Brady Report's recommendation for a unified clearing system is suggested to assure that positions of market participants in more than one market are known to clearing organizations, that lenders are able to consider the intermarket exposure of market participants in making lending decisions, and that the necessity to transfer funds among markets does not impair liquidity.

The Commission believes that these objectives can and should be achieved by the financial regulatory agencies without creating a single umbrella clearing organization. The Commission has taken steps to maximize access to financial data by futures clearing organizations to facilitate cross-market financial surveillance of firms with dual or multiple clearing memberships. Prior to the market break, the Commission recommended the establishment by all futures self-regulatory organizations (SROs) of a computerized system for the routine sharing of margin pay and collect data among all futures clearing organizations with respect to firms that are members of more than one futures exchange.*/ The futures SROs have agreed to establish such a system and are in the process of finalizing its technical aspects. In addition, agreement has been reached with the Options Clearing Corporation ("OCC") for the inclusion in this system of premium pay and collect data for securities options. The Board of Trade Clearing Corporation ("BOTCC"), which has been coordinating development of the technical aspects, anticipates that this data-sharing system will be fully operational for the sharing of futures and OCC option data by the end of February 1988. In addition, discussions are underway with respect to incorporation into this data-sharing system of related data from the National Securities Clearing Corporation ("NSCC"). If NSCC data are included within the system, a centralized data base for all futures and most securities cash flows will be established.

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*/ Currently, the Board of Trade Clearing Corporation and the CME, which together represent approximately 80 percent of futures volume nationwide, share futures variation pay and collect data and option premium pay and collect data on a routine, computerized basis.

The Commission is also exploring ways in which its own large trader data (currently collected from FCMs, non-FCM clearing members, and foreign brokers for all futures market participants with positions over a certain size and used by the Commission for market and financial surveillance), can be expanded to facilitate more effective financial surveillance over futures firms. Such enhanced systems could also generate information of use not only to the futures SROs, but also to the SEC, securities SROs and foreign regulators to facilitate inter-market financial surveillance.

However, to go beyond information sharing and seek to implement a unified clearing system concerns us not only because of the administrative complexity but also due to the increased risks that a unified system might pose. Even if the substantial differences in clearing and settlement procedures for stocks, futures and options contracts were overcome, a single clearing organization would concentrate all risk exposure in a single entity and thus could increase the risk of system-wise financial default in times of great market stress. The Commission believes that existing and contemplated data-sharing systems can achieve many of the benefits of unification while avoiding these risks. We caution against the wholesale restructuring of existing clearing systems without extremely thorough and careful study.

Consistent Margins

As it considers the Brady Report's recommendation to establish consistent margins for futures contracts and stock purchases, the Committee may wish to recall that in enacting the 1933 and 1934 Federal Securities Acts and the 1936 Commodity Exchange Act, Congress understood that, unlike securities markets, the futures markets were not equity investment or capital formation markets. At that time Congress did not require federal oversight of the performance bond function of margin in the futures market. While Congress did vest routine margin setting authority over securities in the Federal Reserve Board, it recognized that authority to regulate margin for futures contracts was better left to the exchanges than the federal government.

While permitting a stock purchase on margin is equivalent to lending a portion of the purchase price of an asset that the buyer owns and controls, futures contracts do not transfer ownership but rather establish reciprocal obligations of buyers and sellers to sell and purchase the underlying commodity in the future. Futures margin is required of both sides to a futures contract and serves as a performance bond from both the buyer and seller to assure that both will honor their contractual obligations when they come due.

In the futures markets, exchanges set the levels for each contract, based in part on volatility, and adjust these levels as required. One measure of the success of this system is the fact that between October 1, 1985, and December 10, 1987, maintenance margins set by the Chicago Mercantile Exchange were sufficient to cover daily price moves 96 percent of the time.

Congress has amended the Commodity Exchange Act of 1936 on at least nine occasions but historically has endorsed the exchange margin system by refusing to provide for routine government margin setting authority. In fact, except in emergency situations, Congress specifically has withheld from the federal government authority to set exchange levels of margin.

The futures margin system has served as an important adjunct to the hedging function and a principal protection of the financial integrity of the futures markets for over 100 years. The value of this system was amply demonstrated during the mid-October market decline, when clearing firms timely satisfied all margin demands, no futures commission merchant failed, and no customer monies were lost due to FCM failures.

The evidence produced to date does not support the conclusion that structural changes are necessary in the futures margining system. Indeed, the Brady Report states that "despite low margin requirements the financial performance control aspect of futures margin has operated in a sound and effective manner on an intramarket basis." Nonetheless, Brady recommends "consistent" margin levels to control speculation and financial leverage. However, it is not at all clear from the Brady Report just what "consistent" means, let alone how "consistent" margin levels would affect the markets.

What is clear is that higher margins would make futures less attractive for hedging. Specifically, commercial hedgers already

own or are anticipating the purchase of the underlying stocks. Accordingly, higher margins simply add to the cost of engaging in risk shifting activities. In addition, to the extent that higher margins diminish market liquidity, they also raise the real cost of hedging.

Lawmakers and regulators must be sure that these regulatory "costs" are outweighed by reasonably expected benefits, and we should be able to specifically identify and evaluate these benefits before tinkering with a system that has withstood the tests of time and market stress. In short, all of us must understand the effects of our regulatory actions.

The findings of the 1984 Federal Reserve margin study entitled A Review and Evaluation of Federal Margin Regulations, are also instructive on the issue of volatility:

> The behavior of stock prices since the enactment of margin regulation also does not support the argument that controlled margin trading will tend to reduce stock price volatility. Despite the relatively high federal margin levels and the very low levels of margin credit since the early 1930's, and the significant changes in the nature of the call loan market, stock prices have continued to be about as volatile as they were in the 50 years preceding margin regulation. Also, evidence on the behavior of stock prices around the time of margin changes suggests that such actions may have had little impact on stock prices, a finding that also casts some doubt on the importance of margin ratios for stock prices.

Further, some advocates of higher futures margins assert that the existing margining system permits public speculators to assume more highly leveraged positions in the futures markets than in the securities markets. There is no indication, however, that any such disparity has played a role in the events of

October under discussion here. Apart from the different functions served by futures and securities margin, public speculation composes a small portion of the stock index futures markets. In fact, market data indicate that the preponderance of S&P 500 futures positions during mid-October 1987 were held by traders likely to hold offsetting positions in stock or other derivative markets. In particular, at least 70 percent of the open interest in the S&P 500 futures market on October 19 involved commercial traders. The futures positions of these commercial traders normally result from hedging or arbitrage transactions and, therefore, constitute auxiliaries to stock positions rather than leveraged substitutes for them.

In sum, because margin regulation does not appear to have been an effective tool in curbing price volatility and velocity of price swings in the securities markets, because leveraged, speculative trading in index futures is not a dominant percentage, and because the exchange-set futures margin system has successfully maintained the financial integrity of the futures markets, even during periods of great price volatility, the Commission believes that the futures margin system should not be tampered with. Furthermore, in fast-moving market situations it is possible that adding another layer of oversight would build in additional response time that could prove harmful.

Nevertheless, the Commission is sensitive to the public policy concerns that have been raised with respect to differences between stock and stock index futures margins, and we will keep

an open mind if new data or arguments are raised on this complex issue.

Circuit Breaker Mechanisms

The Commission supports the Brady Report's recommendation that predetermined circuit breaker mechanisms (such as price limits and coordinated trading halts), could be useful to ameliorate market volatility. The Commission believes, however, that further study is necessary to determine whether the same mechanisms should be utilized in the securities, stock index futures and options markets. The guiding principle should be that circuit breaker mechanisms used in one market must be coordinated with those used in another. Further, they should be made known well ahead of time. Circuit breaker mechanisms should not of themselves introduce another element of uncertainty into the market. For example, the steps taken by the exchanges in response to the market price volatility on the so-called "third Fridays" or "triple witching days," when major stock index futures, options contracts and stock options all expire, have all but alleviated price volatility on those days.

The concept of price limits as circuit breakers is not new to the futures markets, where the exchanges have long imposed price limits on grains and other agricultural contracts. Indeed, the CME, CBT and the KCBT have adopted, pursuant to Commission approval, rule changes imposing maximum daily price limits on the stock index futures contracts trading on these exchanges.

Although the Commission has the authority to halt trading in futures contracts under its emergency power, the Commission believes that this power should be used sparingly and that the exchanges are best able in the first instance to respond to market situations and to assess whether trading halts need to be imposed. Unwarranted cessation of trading eliminates the vital function of the markets--to value assets. Moreover, the effectiveness of trading halts in curbing price volatility is open to question. The two-day weekend following the 108 point drop in the stock market on Friday, October 16, 1987, did not stem the precipitous drop that occurred on Monday, the 19th.

The Commission urges that the question of circuit breaker mechanisms be carefully scrutinized. In view of the differing nature and purposes of the stock and the futures markets, different but coordinated mechanisms may be appropriate. The Commission believes, however, that the decision whether to impose these measures should be made by those best able to assess and address day-to-day (indeed hour-by-hour) market movements--the exchanges, subject to CFTC oversight. The Commodity Exchange Act imposes on the exchanges substantial responsibilities for assuring orderly trading and the integrity of market systems. The exchanges are required to maintain active, affirmative oversight and compliance programs and take necessary corrective actions. The Commission is working with the affected exchanges to explore measures for limiting the possible effect of inappropriate influences on pricing. We believe, however, that nondiscretionary measures are preferred in that they reduce uncertainty.

Information Systems

The Brady report states that the October market decline

illustrates the need for an inter-market information system "incorporating the trade, time of the trade and the name of the ultimate customer in every major market segment." The report recommends that all major exchanges, including the stock exchanges, maintain information systems like those of the futures clearinghouse and large-trader information systems, which detail trades by customer. The Commission agrees with this assessment.

The Commission is committed to strengthening interagency liaison mechanisms to assure the continuation of effective interagency coordination in the future and to put into place emergency procedures. Coordination and information sharing among the exchanges during mid-October was excellent, but there is room for improvement. For example, as I have already stated, the ISG can serve as an important forum for fostering inter-exchange surveillance coordination and for improving exchange surveillance data systems for monitoring intermarket trading.

Frontrunning

The Brady Report also identified "inter-market frontrunning" as another issue warranting further review.

Although the antifraud provisions of the Federal securities laws and the Commodity Exchange Act (particularly where a breach of a broker's fiduciary duty occurs) may be applicable to particular instances of frontrunning, no provision in either statutory scheme specifically addresses frontrunning. Commission rules do, however, specifically require exchanges to prohibit futures brokers from trading ahead of their customers in either futures or related commodity options. Commission rules also require futures commission merchants to establish and enforce internal procedures and controls to ensure that customer futures or option orders in a commodity are transmitted to the floor before any proprietary orders. In this regard, CFTC staff is considering whether it is advisable to recommend, among other things, a regulation establishing a minimum futures industry standard for the prohibition of intermarket frontrunning activity involving transactions on futures exchanges.

As in the case of the CEA and securities laws, the rules of securities, securities option, and futures exchanges do not specifically address inter-market frontrunning. Securities and securities option exchanges have sought to address frontrunning through issuance of circulars pursuant to exchange rules that generally prohibit acts in violation of "just and equitable principles of trade." Futures exchanges have similar rules, and the CME, CBT, KCBT, and NYFE, which trade stock index futures contracts, take the position that frontrunning can constitute a violation of these exchange rules.

Notwithstanding the existence of futures exchanges' rules, CFTC staff has reported that it may be necessary to establish standards for identifying potential intermarket frontrunning trading patterns and a mechanism for the timely and effective communication of market surveillance data related to possible frontrunning activity among all exchanges with common self-regulatory interests. The ISG, of which all securities and securities option exchanges are members, appears to be an appropriate forum for facilitating the communication of such market

surveillance data. The ISG has considered frontrunning issues in the past, and futures exchanges which trade stock index contracts have participated as observers in the ISG's derivative markets subcommittee.

CONCLUSION

The Commission continues to assess the regulatory responses which would be best suited to the evolving nature of the futures markets. The potential benefits from additional regulatory refinements to complement the current structure are under consideration at the Commission level and at the self-regulatory organizations.

Any organized, centralized marketplace should reflect the forces of supply and demand generally at work and must not be subject to inappropriate influences. Those of us committed to responsible regulation must identify any inappropriate influences and devise means of protecting the integrity of the markets and their users. Events in October and subsequent analyses of those events will show us the strengths of the systems and will reveal areas where improvements and refinements are necessary. We have already begun the process of enhancing and formalizing coordination of our responses in emergency situations. We may want to consider new regulatory measures to avoid panic in the markets. We should be able to devise means of eliminating barriers in clearing and payments systems. These issues are complex, and we must try to identify the specific areas where improvements are needed and attempt to foresee the ramifications of such changes so that other, useful parts of the system are not unduly impaired.

We appreciate the interest of Congress and this Committee and look forward to working with you and answering any questions you may have.

APPENDIX TO THE TESTIMONY OF
KALO A. HINEMAN
ACTING CHAIRMAN
COMMODITY FUTURES TRADING COMMISSION
before the
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
February 3, 1988

STATUTORY AND REGULATORY FRAMEWORK FOR FUTURES AND OPTIONS TRADING

The Commodity Futures Trading Commission was created in 1974 as an independent regulatory agency to administer and enforce the Commodity Exchange Act (the "Act" or "CEA"). Based on the premise that all commodity futures and options perform the same basic economic price discovery and risk management functions, the Act establishes a comprehensive and uniform structure to regulate trading of these instruments. Under the Act, Congress has granted the CFTC exclusive jurisdiction over all futures trading. 7 U.S.C. § 2.

In accordance with Congress's view that all futures trading performs the same economic services for users of the underlying product, the CFTC has applied the same fundamental economic and legal standards to futures contracts on all types of products. Thus, a single exchange can trade futures on grain and a stock index under the same regulatory structure. The economic purpose of futures contracts as commercial hedging and price basing instruments is the focal point for structuring CFTC regulation.

Industry growth has been the result. In recent years the futures markets have provided an effective risk shifting mechanism for the financial markets as well as the traditional agricultural commodities. Futures on foreign currencies, energy products, U.S. government securities and stock indices are now the most heavily traded commodities. In addition, under the Commission's oversight, exchange-traded options on futures contracts and physical commodities are now available for hedging price risks.

Nature of Futures and Options

Futures and options are delayed delivery contracts in which parties agree to exchange specified property on a certain date (or over a specified period of time) in the future at a price established in the present. In the case of futures, both parties are obligated to perform in accordance with contract terms. One commits to buy; the other, to sell. Delivery is rarely taken. Instead, in 98 percent of all futures contracts, the contract is extinguished by offset (or establishing the opposite position in the contract). In the case of options, obligations differ. In a "call" option a "writer" (seller) commits unconditionally to sell the underlying asset at a certain price on or before some specified time in the future, and the buyer pays a premium to the writer to gain the privilege of purchasing (of calling on the writer to sell) under the terms specified. Obligations are the opposite in the case of a "put": the writer (seller) commits unconditionally to purchase the asset, and the buyer pays a premium for the privilege of being able to sell (to put) the property to the committed writer under the specified terms.

Economic Purposes Of Futures And Options

1. Risk Management

Whereas the primary economic purpose of the securities markets is capital formation for individual companies, the primary purpose of the futures and options markets is to provide a means of shifting or managing price risks that stem from nearly all forms of economic activity. Nonfinancial firms, financial institutions and other persons maintaining various balance sheet positions face the ever-present risk that the movement of prices or interest rates may adversely affect their income and wealth. Futures and options contracts provide these parties a means to avoid or "hedge" against these undesirable developments. These derivative markets make it possible to fix the price at which an asset can be bought or sold in the future (or the interest rate at which money can be borrowed or loaned). That is, a futures or options position can be established whose market value will tend, to a greater or lesser degree, to vary inversely with the price or interest rate exposure that is being hedged. Thus, losses in value in a cash position resulting from the movement of prices or interest rates can be offset by the gains obtained through the futures or options position.

Two essential aspects of this hedging process deserve emphasis. First, the risks that hedgers seek to avoid are not created by futures or options markets but are inherent to the hedger's underlying commercial or financial activities. Second, while some trades may take place between hedgers with different hedging needs, so that the risk exposure of both is reduced, in many cases the party on the other side of the contract with the hedger is a speculator, who acts essentially as an insurer in the hopes of gaining a profit. Thus, the hedger's risk exposure is transferred to the speculator, not eliminated. The increased market liquidity that results from the trading activity of speculators facilitates the ability of hedgers wishing to hedge to establish and quickly close out market positions on competitive terms.

2. Price Discovery

Futures and options markets also serve an important price discovery function. Speculators, in their efforts to make profits, and hedgers in deciding whether and to what extent to establish hedged positions, endeavor to assess information on current and prospective supply and demand conditions in order to better predict future price trends. To the extent that their predictions and the market positions they take accurately reflect future price trends, their activities serve to assure that cash, futures, and options prices are kept properly aligned with current and prospective conditions of supply and demand. These activities also promote efficiency in the production, distribution, and consumption of goods and services.

3. Price Basing

Futures markets also, in some cases, perform a price basing function. This occurs primarily when trading in the cash market is relatively decentralized, at least to the extent that accurate price information reflecting current supply and demand is difficult to obtain. In such cases, there has been a tendency

for participants in the cash market to base their pricing on prices established in actively traded futures markets.

Jurisdictional Accord With The SEC

In 1981 the CFTC and the Securities and Exchange Commission ("SEC") recognized a need to coordinate their regulatory schemes to meet the needs of new financial instruments being introduced in the securities and futures markets. The CFTC and SEC developed an agreement, known as the CFTC-SEC Jurisdictional Accord, to eliminate jurisdictional questions concerning the two agencies, that were causing uncertainty regarding the development and marketing of such new financial instruments as stock index futures, options on debt securities and options on foreign currencies.

Under the Accord, which was enacted by Congress in 1982 through amendments to the Commodity Exchange Act and the securities laws, the CFTC continues to regulate instruments and markets that serve risk management and price discovery functions, while the SEC continues to regulate instruments and markets that have an underlying capital formation or investment purpose. Specifically, the Accord reaffirmed the CFTC's jurisdiction over:

- All futures contracts (including futures contracts on U.S. Government securities and on "broadly based" stock or bond indices);
- Options on futures contracts (including financial futures); and
- Options on foreign currencies trading in the commodity markets.

Under the Accord the SEC regulates:

- All options directly on securities (including options on corporate stocks and bonds, and Treasury bills and bonds) as well as options on bank certificates of deposit and corporate stock indices; and

- Options on foreign currencies trading on national securities exchanges.

The Accord provides a formula for the designation by the CFTC of futures and options on futures involving securities indices that expressly provides for SEC review of these proposed contracts on the basis of specified criteria. Under this formula, each stock index futures contract and option thereon must: (i) provide for cash settlement or delivery of an exempted security (other than a municipal security); (ii) not be readily susceptible to manipulation of the price of an underlying security; and (iii) represent a group or index of unaffiliated issurers, and be a widely published measure of, and reflect the market or a substantial segment of the market for, publicly traded debt or equity securities, or satisfy a comparable measure. 7 U.S.C. § 2a(ii).

EXISTING REGULATION OF MARKET MECHANISMS

The CFTC has in place comprehensive regulatory, surveillance and enforcement programs to protect the public from fraud, price manipulation and other trading abuses. A key concept in these programs is vigorous industry self-regulation with Commission oversight. By monitoring the futures industry's self-regulatory organizations (SROs) - the commodity futures exchanges and the National Futures Association (NFA) - and keeping a watchful eye on trading on each exchange, the Commission fosters a fair and competitive environment that serves the economic functions of risk shifting and price discovery.

As described in detail below, the Commission seeks to achieve these goals through a variety of regulatory safeguards, including: (1) the registration of industry professionals who deal with the public; (2) the designation of exchanges to trade only those futures contracts serving price basing and risk management functions; (3) oversight of the industry's financial, market, trade practice and account management surveillance programs; (4) monitoring exchange investigation of customer complaints and disciplinary actions; (5) use of a wide array of enforcement tools enabling the CFTC to halt violations, protect customer funds, impose civil money penalties and refer cases for criminal prosecutions; and (6) surveillance information sharing and cooperative agreements with exchanges and other Federal agencies and foreign governments.

Registration

Through NFA, the Commission registers the firms and individuals who either handle customer funds, solicit customers or give trading advice in commodity futures or options. By requiring fingerprinting and a security check on each applicant's background, this system screens those individuals unfit to be commodity professionals from employment in the futures industry. The Commission oversees NFA's processing of applications and, where appropriate, its granting of exchange floor broker registrations. The Commission has responsibility for conducting registration denial or revocation proceedings against a floor broker applicant or registrant.

Designation Process

The Commodity Exchange Act provides that futures contracts may be lawfully traded only through the exchanges that have been designated as contract markets, and that the CFTC may designate as contract markets only those exchanges which demonstrate their ability to prevent, among other things, market manipulations and to perform other self-regulatory duties. 7 U.S.C. §7. Before a futures contract may be approved for trading, the Act requires that the sponsoring exchange show that trading in the proposed contract will not be contrary to the public interest. 7 U.S.C. § 7(g). Under this public interest standard, each new futures proposal must be shown potentially to provide the economic purposes of price basing and/or hedging. This regulatory standard is unique to futures.

Contract Market Rule Review and Approval

Each exchange is required to submit all of its rules and regulations relating to the terms and conditions of futures

contracts, except those related to margin, to the Commission for approval. An exchange can put emergency rules into effect on a temporary basis without seeking prior Commission approval, provided that the exchange's governing body approves the temporary emergency rule by a two-thirds vote, that the exchange notify the Commission of the temporary emergency rule by the fastest available means of communication, and that the exchange thereafter promptly furnish the Commission additional information concerning the emergency and the action taken to respond to it.

If exchange rules violate the Act or Commission regulations, the Commission must disapprove those rules. In order to protect market participants or to ensure fair dealing in futures trading, the Commission may itself amend or supplement exchange rules, after first requesting that the exchange itself make the needed changes.

Congress has specifically excluded those rules which govern the setting of levels of futures margins from the Commission's authority to approve or alter exchange rules, thus allowing exchanges to refine margin levels on a day-to-day basis as they deem appropriate. 7 U.S.C. § 7a(12). For options on futures, the CFTC, pursuant to its plenary authority under Section 4c(b) of the Commodity Exchange Act, 7 U.S.C. § 6c(b), has required that purchasers deposit the full premium at the time that the option is purchased, thus limiting the liability of the purchaser to that amount. Option grantors must deposit margin in accordance with option margin systems established by the exchanges, which are subject to CFTC review.

The Commission also has broad authority when it determines a market emergency to exist to direct an exchange to take any action which the Commission believes is necessary to restore and maintain orderly trading, including changes in margin requirements.

Rule Enforcement Review

The Commodity Exchange Act requires each exchange, through a program of continuing rule enforcement, to ensure that its members comply with exchange rules. 7 U.S.C. § 7(a)(8). Before it will approve an application by an exchange to trade a futures or options contract, the Commission considers whether the application demonstrates that there is in place a suitable rule enforcement program with adequate staffing to make it effective. The Commission periodically reviews each exchange's rule enforcement programs--including audit and financial surveillance, market surveillance, trade practice surveillance, sales practice programs and disciplinary programs--to assure that the exchanges are fulfilling their self-regulatory responsibilities. Each review is summarized in a written report, which is made public. The Commission's findings in such reports have generally been adopted by the exchanges, resulting in continuous SRO program improvements. In certain cases in which SROs nonetheless have failed adequately to discharge their rule enforcement obligations, the Commission has initiated administrative enforcement proceedings against the relevant SRO. In cases where

across-the-board changes were needed, the Commission and its staff have issued guidance in the form of audit guides and, as necessary, the Commission has adopted rules directing SROs to upgrade their own rules and programs.*/

Guidelines have been issued in several areas to assure that SRO rule enforcement programs meet minimum standards. In Financial and Segregation Interpretation 4-1, the Commission's Division of Trading and Markets provided detailed standards for SRO financial audit and surveillance programs, and in Sales Practice Audit Interpretation 1, the Division issued minimum sales practice enforcement standards for SROs. In response to industry growth and experience with volatility, the exchanges have improved their surveillance and rule enforcement programs to assure the financial integrity and fairness of the nation's futures markets.

Financial Integrity Protections

The Commission's financial audit and review program is designed to protect the financial integrity of the futures markets through oversight of industry SRO's audit and financial surveillance programs. These activities are intended to ensure that firms maintain adequate liquid capital and to prevent the misuse of customer funds. The three principal financial safeguards monitored by the Commission are segregation of customer funds, minimum capital and early warning reporting requirements, and margins.

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*/ See, e.g., Regulation 1.35, 17 C.F.R. § 1.35 (1987), which establishes minimum audit trail requirements for the recording of trade executions on all exchanges; and Regulation 1.59, 17 C.F.R. § 1.59 (1987), as amended by 52 Fed. Reg. 48974 (Dec. 29, 1987), which, among other things, requires SROs to adopt rules to prohibit their employees from trading in commodity instruments traded on or cleared by the employing SRO and to prohibit members of their governing boards and committees from disclosing or improperly using material, nonpublic information.

A fundamental financial protection established by the Commodity Exchange Act is the requirement that commodity professionals segregate customer funds from the firm's own funds, and maintain those funds for the exclusive benefit of their customers.

A second principal safeguard assuring the security of customer funds and of the futures markets' overall financial integrity is provided by the Commission's minimum capital and financial reporting requirements for futures commission merchants (FCMs). These requirements are intended to make certain that FCMs are financially sound and have liquid assets sufficient to sustain normal market reverses without losses to customers. Commission regulations also establish an "early warning" system to identify high risk firms for intensified surveillance.

A third financial protection basic to the futures markets is the futures margin system. This system is very different from that in securities transactions. Securities margins are essentially extensions of credit, loans to an investor to finance the purchase of a security. A margin call in stock is made to protect the creditor from the dwindling value of the collateral used to secure the loan. Minimum margin levels for securities trading have traditionally been set by the Federal Reserve Board, pursuant to the Fed's responsibility for credit policy.

In contrast, futures margins serve the economic role of a performance bond for the trader's commitments under the futures contract. Unlike securities margins which are paid only by purchasers and short sellers, both the "buyer and the seller" must post futures margin. This performance obligation for each cleared contract is secured by the clearing organization's demand for "original" margin and, depending upon subsequent price fluctuations, for "variation" margin, from the clearing member carrying each customer position. The exchanges also set minimum requirements for margin that their member FCMs must obtain from their customers as "initial" margin for each contract. These margins are based upon moving averages of historical volatility to cover one or two day's potential market movement and are adjusted frequently depending upon market conditions. Futures customers are also subject to maintenance margin requirements established by the exchanges, which generally vary from 40-85 percent of initial margins. If the value of a customer's account drops below the maintenance level, the customer must deposit sufficient funds in his account to restore the margin to 100 percent of the initial requirement. Otherwise, the FCM is allowed to liquidate the customer's account. The requirement that customer accounts be marked to present market value at the end of each trading day is a unique feature of the futures markets.

The Commodity Exchange Act and Commission regulations require each exchange to adopt and enforce minimum financial requirements and reporting rules that are at least as stringent as those established by Commission regulations. NFA and the exchanges have the primary direct responsibility to ensure the financial integrity of their member firms. The Commission is responsible for oversight of the self-regulatory organizations' financial surveillance and rule enforcement programs. Its routine financial oversight activities include evaluation and monitoring of SRO financial surveillance and audit activities, direct audits of FCMs and introducing brokers who are not members of any SROs, and targeted review of FCMs that have "early warning" conditions.

Market Surveillance

The Commission's market surveillance program is designed to maintain free and competitive futures and options markets by preventing excessive speculation and unwarranted price movements. The Commission's program protects the markets from manipulation and other anticompetitive practices by daily monitoring of all active futures and option contracts, the activities of large traders, significant cash futures price relationships and fundamental supply and demand conditions. The Commission also periodically reviews exchange programs to enforce their speculative limit rules.

The Commission routinely conducts daily market surveillance on the basis of data detailing aggregate market activity and the positions of individual large traders. These data are provided daily to the Commission by all exchanges, FCMs, clearing members, and foreign brokers and are routinely available for computerized analysis on a next-day basis.

The Commission's market surveillance staff works closely with the exchanges to deal with any potential market threats that may develop. The Commissioners are apprised of potential problems and significant market developments at surveillance briefings scheduled on a weekly, and if necessary, on an emergency basis, so that the Commission may take prompt corrective action if needed.

Trade Practice Oversight

The Commission requires each futures exchange to maintain a trade practice surveillance program designed to detect trading abuses such as wash trading, bucketing, cross trading, prearranged trading and fictitious trading. The Commission's trade practice surveillance program has several elements. It includes the collection of trading data, the direct analysis of particular market segments, transactions, or participants to detect trading abuses, and floor surveillance to keep apprised of routine and variant trading practices and procedures and otherwise to obtain information from exchange members and exchange or firm personnel. Based on this surveillance activity, the Commission regularly refers suspicious trading activity to the exchanges. If warranted, the Commission brings enforcement actions against those engaging in illegal trading activity.

During the past year, the Commission has developed a computer data base of trade data from the exchanges, which provides the Commission with an automated facility for monitoring and analyzing exchange trading. The Commission's ability to conduct effective trade surveillance has been greatly enhanced not only by the computer-assisted trade database, but also, the futures exchanges' implementation of improved audit trail, or record of trading, systems which provide one-minute execution times for each trade. Since July 1987, the exchanges have had in place systems designed to comply with the Commission's one-minute standard adopted in 1986. The exchanges' implementation of this requirement has significantly increased the exchanges' and the Commission's ability to reconstruct and analyze trading quickly without requesting and reviewing large numbers of original trading documents.

Sales, Marketing and Account Management Practices

The Commission oversees SRO programs designed to prevent fraudulent and misleading practices in marketing and in the handling of customer accounts. The Commission monitors futures industry compliance with the standards established by the Commission in the areas of sales, marketing and account management practices, with particular emphasis on full disclosure being made to the public regarding the costs and risks involved in trading. The Commission assesses the adequacy of exchange and NFA sales practice audit programs required by CFTC regulations, and it may perform selected spot check audits of FCMs, commodity pool operators, commodity trading advisors and introducing brokers.

Disciplinary Actions and Other Enforcement Mechanisms

The Commission requires each exchange to review promptly and thoroughly all complaints received from customers concerning the handling of their accounts or orders. An adequate exchange

program of investigating customer complaints consists of a meaningful inquiry into every complaint alleging facts which, if true, would constitute a violation of an exchange rule.

In order to protect futures customers by ensuring that exchanges will promptly and effectively discipline those members that violate exchange rules, the exchanges are required by Commission regulations to include in their rule enforcement programs a procedure which results in the taking of prompt, effective disciplinary action for any violation found to have been committed. NFA has authority to impose various sanctions upon its members for violation of NFA rules. These sanctions include imposition of fines and suspension or expulsion from membership.

The Commission oversees the exchanges' and NFA's implementation of these procedures and hears appeals from exchange and NFA disciplinary decisions. In addition to its oversight responsibilities, the Commission uses an array of enforcement tools to investigate and prosecute violations of the CEA and Commission regulations. Congress has given the Commission authority to conduct investigations (7 U.S.C. § 12), seek injunctive relief (7 U.S.C. § 13a-1), assess civil penalties (7 U.S.C. §§ 9, 13a), issue cease and desist orders (7 U.S.C. § 13b), and refer cases to the Department of Justice for criminal prosecution (7 U.S.C. § 13(a)). The Commission's vigorous enforcement program is designed to curb the misuse of customer funds, manipulation, fraud, anticompetitive practices, and other trading abuses.

Information Sharing and Cooperative Agreements With Other Federal Agencies

The CFTC has taken several concrete steps to coordinate its activities and share information with other Federal agencies concerned with specific commodities underlying designated futures contracts. These steps reflect the Congressional understanding of the relationships between the cash and futures markets. Thus, under Section 2a(8) of the Act the CFTC maintains liaison with the Department of Agriculture to assure that grain and produce futures trading reflects supply and demand factors in the agricultural markets. Similarly, under Section 2(a)(8) of the Act, the CFTC keeps the Department of the Treasury, the Board of Governors of the Federal Reserve System, and the SEC fully informed of CFTC contract market designation and regulatory activities that relate to the responsibilities of these agencies for the purpose of seeking their views, and for considering the relationships between the volume and nature of investment and trading in securities and other financial instruments under their jurisdiction and in futures contracts regulated by the CFTC.

1. Information Sharing Agreements

a. Financial Futures

The CFTC has entered into joint surveillance agreements with the Federal Reserve Board, the Treasury Department and the SEC regarding futures on financial instruments, including stock indices. Under these agreements, agency staff share confidential market information and hold quarterly meetings to discuss current market conditions and the expiration of futures contracts on various financial instruments.

b. Banking Regulators

The CFTC has entered into agreements for sharing bank-related market information with the Comptroller of the Currency, the Federal Home Loan Bank Board, the Federal Deposit Insurance Corporation, and the Federal Reserve Board. These regulators, along with the Treasury Department and the SEC, have been invited to attend the Commission's weekly surveillance meeting where relevant market data is discussed.

c. Liaison With the Department of Agriculture

The CFTC has a special relationship with the Department of Agriculture that includes the attendance of USDA representatives at CFTC's weekly market surveillance meetings, the appointment of liaison officials, and other regular contacts.

d. Futures on Petroleum-based Products

The development of futures on such petroleum-based products as heating oil and gasoline prompted the CFTC to develop a strong working relationship with the Department of Energy, which includes the regular exchange of data and staff discussions on pending policy issues.

e. Cooperative Agreements With Foreign Governments

In an effort to enhance cooperation and mutual assistance in securing compliance with and enforcement of the securities and commodities laws in the United States and foreign countries, the CFTC, the SEC and the responsible regulatory agencies in Great Britain, Canada, Australia and Singapore have entered into formal and informal agreements to share information and cooperate in their enforcement efforts.

2. Contract Market Designation

The CFTC provides the Federal Reserve Board and the Treasury Department with 45 days to comment on certain proposed futures contracts on financial instruments. As previously discussed, the SEC reviews applications for designation as a contract market in futures on stock indices under the CFTC-SEC Jurisdictional Accord. In addition, the CFTC consults with interested Federal agencies before approving new futures or options on such commodities as energy futures or Eurodollars.

3. Office of Congressional and Governmental Affairs

The CFTC's Office of Congressional and Governmental Affairs (OCGA) coordinates the CFTC's activities involving other Federal regulatory organizations. The Office maintains regular communication with the Departments of Agriculture and the Treasury, and confers informally with the Board of Governors of the Federal Reserve, the SEC, the Departments of Justice, State, Energy, Commerce and Labor, as well as the Federal Deposit Insurance Corporation, the Federal Home Loan Bank Board and the Federal Trade Commission.

The OCGA also serves as the Commission's liaison with Congress, including the Commission's oversight and appropriations committees and their staffs.

Information Sharing By Stock and Futures Exchanges

In 1980, the futures exchanges established the Joint Audit Committee ("JAC"), which is composed of representatives of all futures SROs. The JAC coordinates audit and financial surveillance, plans, policies and procedures, particularly with

respect to FCMs that are members of more than one SRO. Responsibility for monitoring firms that are members of more than one SRO is allocated among the SROs under a Joint Audit Plan in which all of the exchanges and NFA participate.

In 1981, the securities exchanges formed the Intermarket Surveillance Group ("ISG"), which is responsible for coordinating industrywide exchange surveillance data so as to assure the integrity of options and equities trading. The ISG is comprised of senior surveillance and enforcement representatives of the following SROs: AMEX, Boston Stock Exchange, CBOE, Cincinnati Stock Exchange, Midwest Stock Exchange, NASD, NYSE, Pacific Stock Exchange, and the Philadelphia Stock Exchange. Exchange surveillance staff from the Chicago Mercantile Exchange, the Chicago Board of Trade, and the New York Futures Exchange recently participated in meetings of a sub-committee of the ISG concerning the surveillance of stock-index products, and have, through the auspices of the ISG, exchanged confidential information regarding the expiration of stock index futures and options.

The Commission believes that the ISG can serve as a vital forum for fostering inter-exchange surveillance coordination between securities and futures exchanges, and for improving exchange surveillance data systems for monitoring intermarket trading. To further these goals, the Acting Chairman of the CFTC recently urged the ISG to consider, and the SEC to support, inclusion of the futures exchanges in ISG deliberations, through formal membership or other means.

The Commission continues to assess the regulatory responses which would be best suited to the futures markets. Events in the last six months indicate that the fundamental structure already in place works. The potential benefits from additional regulatory refinements to complement the current structure are under consideration at the Commission level and at the self-regulatory organizations.

The **Chairman**. Thank you very much, and we are happy to accept your report, and thank you for a very clear, emphatic statement. You're a man who leaves no doubt where you stand. That's very helpful.

Senator **Dixon**. Mr. Chairman, I apologize for imposing upon you. I know you are going ahead with your questions. I have to be absent for about 15 minutes——

The **Chairman**. Of course. Go right ahead.

Senator **Dixon** [continuing]. And I would hope there's going to be questioning going on, so I can ask some questions.

The **Chairman**. Did you want to ask questions now?

Senator **Dixon**. No, I prefer to do it when I come back.

The **Chairman**. OK. Fine.

LEGISLATIVE RECOMMENDATIONS

Chairman Hineman, I have been asking the agencies that have regulatory jurisdiction, including the SEC, and I also asked the Brady Commission and the Fed, to help the committee with specific legislative recommendations, as to what you feel, if anything, the Congress should do, what kind of action you think we should take, and I would appreciate it if you could submit such recommendations, pro or con, to the committee by March 4.

Will you do that?

Mr. **Hineman**. Mr. Chairman, we will submit some statements to you, but at this time, I can tell you, we do not see a legislative need arising. The more immediate problem, I think, is for us to get together on the coordination efforts. I agree with Chairman Ruder in that I think we can get together and do these things, that I think need to be done now.

The **Chairman**. Well, that's fine. That's fine, but I hope you will discuss with your other officials of the CFTC the possibility of submitting a recommendation, even if you simply tell us, as you've told me now, that you don't think you would have any major recommendations.

Mr. **Hineman**. Mr. Chairman, we will do that.

The **Chairman**. And we would also ask you to submit any recommendations as an independent agency, not checking it with the executive branch, since you are an independent agency. Would you do that?

Mr. **Hineman**. I'm told by general counsel that if we send legislative recommendations and budget items, we must send them to OMB and Congress at the same time.

The **Chairman**. Well, forget about the budget items. [Laughter.] You said legislative recommendations and budget items. Just send us the——

Mr. **Hineman**. And budget items.

The **Chairman**. Don't send us the budget items. Send us the legislative recommendations. [Laughter.]

Mr. **Hineman**. If it's a report, we do not have the same constrictions.

The **Chairman**. All right. Now let me ask you this.

You said that you would like to see the SEC and the CFTC as equal partners. You just heard Chairman Ruder say that that's fine, let's be equal partners all the way up to when there is an irreconcilable difference. He says that if there is an irreconcilable difference, the SEC should prevail. Now that's not an equal partner, and I'm inclined to agree with Mr. Ruder. I think somebody has to prevail. If irreconcilable differences occur, you might take a majority vote when somebody else, maybe the Fed or some other agency, is serving and the SEC could be out-voted. But he says that the SEC has the regulatory responsibility, has had it for years, has the resources, and so forth, and should be the prevailing agency.

What's your response to that?

Mr. HINEMAN. Well, for one thing, let me repeat that I believe in functional regulation, and I believe we're the expert in one area, he's the expert in the other area. I do not believe that that expertise naturally, normally carries across those markets. I don't agree with that.

The CHAIRMAN. But don't you agree that it's a single market, and that in many of these areas, you both have interests?

Mr. HINEMAN. It is a single market to the extent that it responds to the same economic signals, and the cash and futures sides do interface just exactly the same as they interface in the other markets on which futures contracts are traded, and there are the same needs for coordination in this market that there are in the others.

I do believe that good faith efforts and cooperation can solve these problems. I sincerely believe that. And I think that they will be solved much quicker by equal partners sitting down to do it than they will the other way. If there is a need for something stronger than that, then I would suggest that perhaps Congress needs to come with some kind of a strong wording.

The CHAIRMAN. Well, that's the way he put it initially. He said that Congress should make the decision. But it seems to me that what we have to do under those circumstances is to say how the decision will be made by the agencies. You are the experts; we aren't.

Mr. HINEMAN. And that's what I am saying. I think at that point maybe the Congress wants to state affirmatively that these two agencies shall get together and do this, that they shall work together and resolve these issues, but I think that if we go in there in the status of unequal partners, I don't think that's a partnership.

The CHAIRMAN. Well, I agree, it's not a partnership, and I'd like to see an executive that can act, not a partnership that can debate.

But let me go on and ask you another question.

Mr. HINEMAN. If I might, one of the other major issues we have is not far from resolution. It is the circuit breaker. Chairman Ruder said he thinks we can get together. We may not be far from resolving that. I think that type of partnership needs a chance to work.

The CHAIRMAN. Well, that's fine. On circuit breakers, of course, the decision is probably likely to come down in favor of the system you have. You, I think, have a more desirable system than the New York Stock Exchange. You have a real circuit breaker that operates now. They don't. At least they don't seem to have it on a very comprehensive basis. Individual stocks close down and don't open, but I think your system is better in that particular respect.

COMMODITY EXCHANGES EXCLUDED FROM MARGIN REQUIREMENTS

Mr. Hineman, in your written testimony, you suggest in the 1930's, the Congress deliberately chose to exclude commodity exchanges from margin requirements, leaving that up to the self-regulatory organizations, but there were no derivative stock-related instruments on the futures exchanges in the 1930's. The situation has changed dramatically, particularly in the last 3 or 4 years. You then cite a 1984 staff study at the Fed, which in one part suggests that margins may not reduce stock price volatility, but that same report concludes, and I quote:

> The key issue that must be resolved is whether leveraged trading of stock index futures has the same potential for influencing the behavior of stocks and for creating risks for customers and their brokers, as does such trading in the underlying stock market.

They go on to say:

> Since the prices of stock index futures tend to move in close accord with the underlying index of cash market prices, it seems reasonably clear that to provide the same degree of protection for unsophisticated participants in these markets, roughly the same initial margin requirements should be imposed in each.

Mr. HINEMAN. As I said in my original testimony, I think we have to get a handle on who pays what on the stock market side, before we can resolve that issue and understand how much leverage there is and who has it. I don't think we know the answer to that at this time. I also think that we need an understanding of the marking to market system in futures markets. Regardless of which side of the market you are on, if the market moves against you, you have to come up with additional maintenance margin. So when you lump together all those maintenance margins, I don't know what that final total is. I cannot refute or verify the statement made this morning, as far as what those margins are.

I am saying we need to find that out before anybody can or should go any further with that margining issue. And I think the Brady report did a good job of separating the two issues as to margins. One function of margins is security for the system, a safety net under the system, and on the futures side that has worked extremely well—billions of dollars assessed, all collected. No firms went under. So we need to remember that when we're talking about margins. But on the other side, you need to know how much leverage there is. I just don't think we can have an intelligent conversation on that until we find out who pays what.

The CHAIRMAN. My time's up, but you have, on the one hand, a futures market that operates with 10 percent margins and the New York Stock Exchange operates with 20, 25, up to 50, depending on whether a professional or the nonprofessional investor. It seems to me you have an enormous discrepancy here, and as has been indicated many times, if you function together, that low margin requirement results in more speculation and more volatility.

My time is up. Senator Bond.

Senator BOND. Thank you, Mr. Chairman. I'm very much interested in the line of questioning that you're pursuing, and I think this is a point that we need to explore further. Perhaps I don't understand or maybe I just haven't been persuaded by Chairman Hineman's discussion so far. I do want to commend you and the CFTC for having compiled very complete information. I think you've done an excellent job, and as we have commended the other regulators, I think that you definitely deserve commendation for the role that you played. I am bothered by the proposition that a large institutional investor, which could either go into the stock market and control stocks by buying on margin or go into the futures market and attempt to control a much larger number of shares, because of the lower margin requirements, whether you call the margin a performance bond or not. There is a different role that the margin and performance bond plays beyond just whether they're going to perform on the contract.

Is it not possible for a large institutional investor with the smaller margin requirements on futures to control a much larger block of stock?

Mr. HINEMAN. Senator, I understand that concern and believe me, even though I have been very forceful in my testimony about the margin issue, there isn't any issue that I won't sit down and talk about with the other market regulators on the other side.

I'm just saying that we need to be sure of our data and be specific, so that we're not off in the wild blue yonder with figures that don't stand up. And in this area, again, I would say that with the mark-to-market system, the large institutional trader you're talking about, if he has a portfolio of stocks, he has already paid the margins on the securities side. Whatever it is that large portfolio holders pay, and I don't know what that is, but he has paid that. Then if he wants to hedge that, he comes into the futures market, and he pays futures margin. He pays his original margin, and if the market moves against him tomorrow, he pays additional variation margin and so on and so on. And I would say that probably many times during that week, there were futures positions that probably had a much higher percent of margin than the 50 percent that is in stock.

The more I look at this issue, the more confusing it is, and the more I realize that this is a classic example of where we need to get the data before we can decide. It's not enough to assume that someone has leverage. I want to know who has leverage, where, and how much.

LIMITS ON SIZES OF POSITIONS

Senator BOND. Well, I can say from my standpoint, and I believe that others on this committee have expressed a very real concern that the small investor really was at the back of the bus during October 19 and 20, and there is a very widespread perception that there is too much opportunity for the large institutional investor to control the market to the disadvantage of the small investor. Would you be prepared to consider limits on sizes of positions? Is this another way of dealing with that problem?

Mr. HINEMAN. I think whatever we talk about, we have to think bilaterally. We have to think in terms of whether we're willing to do that on both sides of the market. If bigness is a problem, and we want to do something about it, then we have to really look at it totally. That's a very philosophical question and I've not had discussions with anyone on it.

Let me just say that there have been a number of enhancements in the financial area, including greater information sharing, done by us already, as I alluded to in my opening statement. And it's very near, in my opinion, to being the kind of a product that we're looking for, at least initially, to solve the problem of better information about where the financial credit is in the system.

In the area of surveying that small customer, I agree with you, I'm very much concerned about his plight. I would say that the small public customers I know of, and the times I was in the stock market, the margin wasn't 50 percent. I paid for that stock. And I think most of them or a lot of them do. So the margins are different there too. I think they paid 100 percent for it and probably most of them threw it in the lock box, and it's still there.

You know, another figure we need to look at—while we get very incensed, and we should about this market drop and what happened—is how many stockholders did not trade. I think I've seen the figure that 3 percent did trade.

Senator **Bond**. And they got—at least on paper they took a real hit, because somebody was in there, and there were some very large movements.

Mr. **Hineman**. I agree with your concerns.

Senator **Bond**. Let me ask another area about which I've already expressed my views in discussions with other people who testified before our committee. That is portfolio insurance, and from what you said and from what I read, are you telling us that portfolio insurance is not a flawed concept and one that didn't have any impact on the market downturn?

Mr. **Hineman**. I am saying portfolio insurance is a many-faceted thing, and to say portfolio insurance did or didn't have an impact is like trying to nail Jello to the wall, because portfolio insurance comes in many different kinds. In some instances, it's asset allocation. In some instances, it's hedging. In some instances, it's what they call dynamic hedging. What I call true portfolio insurance, they not only do on futures markets, they can also do it totally just on the stock market, if they have a certain program where at a certain trigger point they're going to sell so many stocks.

Senator **Bond**. Well, that's what I believe, to conclude, is——

Mr. **Hineman**. But that happens on both sides.

Senator **Bond**. But they have used the sale of futures contracts as the price goes down, and we've had too much testimony from too many witnesses for me not to believe very strongly that dynamic hedging, selling futures contracts, buying fire insurance after the house is on fire, doesn't make any sense and causes part of the problem.

Mr. **Hineman**. I agree with that, and I think those kind of portfolio insurers learned a lesson. I think they found out the same thing. You can't insure when the fire is already started on the back side of the house. But I think we need to make clear what we're talking about and look at the numbers, what percent they were on each side of the market. There was a statement made here this morning by someone that those people have learned a lesson. I tend to think so too, but rest assured that's not going to be good enough for us; we're going to pursue that.

Senator **Bond**. Mr. Chairman, I apologize for going over my time, but my digestive system would not let me contain that last view. My apologies.

The **Chairman**. Senator Riegle.

Senator **Riegle**. Thank you, Mr. Chairman. I want to follow along with the same subject that you and Senator Bond have raised here with respect to how exactly the margin system does work, and I must say, we don't get a chance to see much of each other here, because you are not really under the jurisdiction of this committee. So we are exploring subjects that are less familiar to this committee because of that divided jurisdiction, but I must say with respect to Senator Bond's illustration about the small shareholder getting pushed to the back of the bus, which I think is accurate, I think we saw some cases where the small shareholder was pushed off the bus and run over by the bus. [Laughter.]

And so it's a serious matter, it seems to me, in terms of where the small investor and shareholder fits into the scheme of things.

Now I want to sort of walk you through two or three questions here and make sure that we're in agreement with one another.

In terms of the margins on the—say the New York Stock Exchange, the Fed sets those margins; does it not?

Mr. **Hineman**. Correct.

Senator **Riegle**. Am I correct in understanding that in the futures market that you do not set the margins nor does the Fed but the markets themselves set the margins; is that correct

Mr. **Hineman**. The exchanges set the margin.

Senator **Riegle**. How much power do you have to reach in and, in a sense, try to bring about a different margin figure than the markets themselves might set?

Mr. **Hineman**. We have a very strong oversight capability to declare an emergency and say it needs to be different and say what it should be.

Senator **Riegle**. You have the power of law to do that?

Mr. **Hineman**. By statute.

Senator **Riegle**. Pardon?

Mr. **Hineman**. Yes.

Senator **Riegle**. But you have to declare an emergency to do it?

Mr. **Hineman**. We have to declare an emergency.

Senator **Riegle**. How often have you done that in the last, say, 5 years, would you say?

Mr. **Hineman**. We have declared an emergency four times since the CFTC was formed in 1974.

Senator **Riegle**. I'm sorry?

Mr. **Hineman**. Four times since 1974.

Senator **Riegle**. Four times since 1974.

Mr. **Hineman**. Not just on the margin issue but on all issues.

Senator **Riegle**. Yes. Have there been any in the last 12 months?

Mr. **Hineman**. No, sir.

THE MARGIN SYSTEM AND THE FUTURES MARKET

Senator **Riegle**. Could you give us an illustration of how the margin system works in the futures market? I mean, just concoct an illustration. If somebody comes in and buys a future contract and wants to buy it on margin, how does it work and then what happens at the end of the day, in terms of the marking to market, and what happens as that person stays in that contract in subsequent days, if there is a rise or fall in the price of that particular contract, how are the adjustments made in the margin? Can you give us a simple illustration that we can all understand?

Mr. HINEMAN. I'll certainly try.

The original margin, take the S&P contract, for instance. It started out at $7,500 and before the week was over, they had raised margin requirements several different times and ended up at $15,000 or $20,000. Let's use the $15,000 figure. If I wanted to buy an S&P 500 contract, I would have to put up $15,000 as original margin. Let's say that the market moved against me that day——

Senator RIEGLE. And what percent would that be of the total contract. That's the margin, but that would represent what?

Mr. HINEMAN. I can't give you that answer, but I'll supply it for the record.

Senator RIEGLE. Well, can you roughly? I mean, is there a range? I mean, can you——

Mr. HINEMAN. I think that $20,000 or that $15,000 would be, I think, probably in the range of 17, 18 percent, I think.

Senator RIEGLE. So it's about a 6 to 1 multiplier here, in terms of the money you put in versus the amount of the contract that you actually are able then to commit for.

Mr. HINEMAN. But to continue with the process, if the market moves against me that day, if it moves far enough, I will have to restore my maintenance margin to its original level. Whatever that takes, I'm going to have to do it that day. And it doesn't make any difference whether I'm long or whether I'm short. Both sides of the market have to come up with that kind of margin, and if it moves against me, then the next day and the next day and the next day, it's the same thing.

Senator RIEGLE. I understand that. Now if I've got it straight, that means that if—let's say the margin is 18 percent, as the price changes, I have to maintain the same 18 percent up and down the line.

Mr. HINEMAN. No. It's in dollars. It's in dollars.

Senator RIEGLE. Well, the percent converts to dollars, but you're not suggesting to me at some point I have to put up 50 percent.

Mr. HINEMAN. I have to put enough money to restore that original $15,000 to bring that back up to where it should be. In other words, if I have a market loss that day of $3,000, I've got to come up with $3,000.

Senator RIEGLE. Let me try to put the question a different way. And that is, if a person has to come up with the 18 percent, if that's the operational margin percentage that you have to have for that contract, if the price varies in the future, in the period ahead, do you still have to maintain that same percentage?

Mr. HINEMAN. That's never looked at. That kind of percentage figure is not used in margining. There is a certain margin amount that is established, based upon risk. This is a system that is designed to protect the market and the brokers and the buyer from the risks involved. And the margin amount is determined based on what is commensurate with the riskiness of that market at that time. That's the reason they raised margins during that week, because the risk went up, so the margins went up. The margin is not a percentage of anything, but it's based upon risk.

Senator **Riegle**. The reason I asked the question is not only because it's complicated, and it's not just those of us in the room, but presumably some people across the country are trying to follow the meaning of what we're talking about here, and I'm trying to establish the comparison of the way in which your margin system is the same as or different than the margin system in the underlying securities over in the securities markets, the direct securities markets.

And my time is up, and I'm not sure that we've yet established exactly how they are the same or different.

Mr. **Hineman**. Rest assured that this is an issue I'm sure we are going to be doing a lot more looking at, and I'm very serious when I say we need to find out who pays what on both sides, so we can really compare these issues.

Senator **Riegle**. Well, look, let me be very frank with you, and I look at this with an open mind. I'm not here with any kind of a predisposition on the question of where jurisdiction should begin or end, but in a discussion like this on something that, you know, is pretty well known, at least by the people on your side of the table, if it can't be made understandable in pretty short order, whether for me or this committee or in an illustration, we have problems. I don't want you to not have the time you need, but if it's that arcane, then I'm not quite sure where that leads us.

Mr. **Hineman**. That's not the part that I think needs clearing up. The part that I think needs clearing up is what margins are paid on the stock market side. I haven't the foggiest notion what they are, what the schedule is of how they're paid, so we can compare.

Senator **Riegle**. But again, if you were to take a hypothetical and take a percentage figure, if it's 50 percent, say, you can track through how that 50 percent system works, if the price of the stock goes up or down. I mean, that's a fairly simple process, and I'm not hearing the same simplicity to the description of the system that I have in the area where your jurisdiction is.

Mr. **Hineman**. We will submit you a paper which will illustrate what I think your question is as to how these futures margins operate.

Senator **Riegle**. I'll read the paper, but it is sort of strange to me why we can't somehow explain it back and forth across the table. But my time is up, and I don't want to trespass on my colleagues here.

The **Chairman**. Senator Karnes.

Senator **Karnes**. Thank you, Mr. Chairman. Mr. Chairman, I have a statement for the record that I would like to submit, if I may,

The **Chairman**. Without objection, it will be put in the record.

WERE MARGINS ACCURATE ON OCTOBER 19?

Senator **Karnes**. Thank you. Mr. Chairman, I guess the question that I continue to come back to as I look at all the very intelligent discussion of these issues in around the October events, comes to the actual nature of the risk, and the question that I pose to you, I guess, first of all, would be that, do you feel that the margin levels during the week of October 19 accurately assessed the risks that those companies' positions held?

Mr. **Hineman**. I assume that when you ask that question, you're saying in the futures markets.

Senator **Karnes**. Yes.

Mr. **Hineman**. Yes, I do. I think the proof is in the pudding. Those margins did what they're supposed to do. They are supposed to assess the risk and to make sure that the money is there to keep paying the margins that day. And the first thing the next morning, we have a run as to the collections of margins. Billions of dollars were assessed and all were paid. The margins were functioning properly. As the risk proceeded to increase, the exchanges made the proper response and raised those margins. I was in contact with them at the time they did it, and I approved of what they did. I think that's a proper response, to raise margin requirements when the risk goes up, to make sure that system continues to function day after day and that the margins are paid, and it did function that whole week. All margin calls were paid. That's the real proof of the margining system. And that's what it's for.

No futures brokerage firms went under, and no customer money was lost because of default of a brokerage firm.

Senator **Karnes**. Were there any clearinghouse members that were left with a large uncovered debit, because they couldn't meet their margin calls. I guess you're saying that, no, they were cleared in a timely fashion and met in a timely fashion.

Mr. **Hineman**. Are you saying—would you repeat that question?

Senator **Karnes**. Did anyone leave any clearinghouse members with a large—or were there any accounts that were left with large uncovered debits because the broker itself couldn't make their margin calls to cover their losses?

Mr. **Hineman**. Brokers did not default on the margin calls, and the clearing members did not default on the margin calls. Did they have customers for whom they had to pay some margin calls? There were some. And that's one of the recommendations that we have made is that brokers be more careful in how they assess customers' risks. But after all, they're the final deep pocket, and the system goes like that. If I, as a customer, don't make that margin call, then that broker is responsible for the margin call to the clearing member and the clearing member is responsible to the clearinghouse, and if the clearing member cannot put up the funds, and the clearinghouse cannot make up that amount, which has never happened, then the responsibility falls on the deep pockets of all the clearing members.

So the system is secure, and the incentive is on that broker to get that margin, because if he doesn't, he has to pay it.

Senator **Karnes**. A great incentive, I would think. If futures margins are set as a fixed percentage by statute or Government fiat or whatever, this, in my mind, may limit your ability to adjust to situations in times of high volatility, where there may be not enough margins, or in times of low volatility, where there may be—there will be too much.

Mr. **Hineman**. Mr. Karnes, I think you're right on target. I think that this is one of those areas that need to be adjusted, dependent upon the risk of the moment, and you can't assume that 1 day or 1 week is quick enough, because it is not. I think it needs to be right at that level, because its basic purpose is to assess the amount of money that needs to be up there based on riskiness, and that's the way that it's done. I couldn't agree more.

Senator **Karnes**. We've been talking here about the small investor, and in my State of Nebraska, most of the investors that were participating in the market were small investors, either directly or through their participations in pension funds or mutual funds. I'm concerned about restrictions or additional Government requirements that may impact the small investor and the ability for the small investor to profit. It is the conclusion of, I think, the Brady Commission and most of my colleagues, and indeed, myself, that some of these small investors were disadvantaged as far as getting access to the market during all the volatility.

Is it correct to assume that small investors' earnings may be hurt or opportunities for small investors to profit, if we place some unreasonable restrictions on your ability to manage your responsibility, which is, indeed, managing or overseeing the marketplace?

Mr. **Hineman**. Looking just at the stock index futures markets, and that's all we're talking about here today, it's a professionals' market. It is an institutional market. The little person, basically, is not in the stock index futures market. So that is one thing we need to recognize, that it is basically institutional, large institutional users that are using these markets, or the house accounts of the brokerage firms. In other words, it is someone who has the know-how to use these markets, who has the deep pocket to continue to make those margin calls, and so forth.

But yes, margin calls very definitely have something to do with the restrictive nature of how much you're going to pay, or make people pay past, the point of prudence and at what point do these markets also have a tendency to go overseas.

The overseas futures markets are beginning to go like mad. They're really coming on.

Senator **Karnes**. In other words, this activity is going to take place someplace, and if it's not onshore, it's going to be offshore.

Mr. **Hineman**. The needs of those large institutions are there. They have needs. Is the stock exchange, in itself, serving all those needs? I don't think so. They wouldn't be looking for those needs to be served in other places, if they were getting them served at the stock exchange. Were the stock exchange systems able to accommodate the needs of all these institutional traders? And bear in mind, these institutional investors are not faceless. They are our retirement funds, our university endowment funds, and so forth, and they are large mutual funds. They have needs.

So yes, I think that if they have risk shifting and asset allocation needs that a derivative market can meet, and if something would happen, whether through too-high margins or whatever, so that they couldn't use these markets that they're using right now, then they'd find another market. And it might be overseas.

Senator **Karnes**. Thank you, Mr. Chairman.

Senator **Riegle** [presiding]. Thank you, Senator Karnes. It's interesting that the Katzenbach study done for the New York Stock Exchange, I think, recommended that maybe they ought to consider getting into the index business themselves, partly because of the point, it's the line of thinking that you were just expressing that, if there's a need, and it's going to go somewhere, maybe they ought to look at it as a business themselves, but in any event—Senator Graham.

Senator **Graham**. Thank you, Mr. Chairman.

Mr. Chairman, I have enjoyed your testimony and listening to the response to questions. I was pleased to know your background in the cattle business. My family has been in that same business.

Mr. **Hineman**. It's nicer to recognize that now than it was a couple of years ago, with what the market has done.

Senator **Graham**. It is nicer. My father lived by the economic theory that any stock he invested in would have four legs and a tail, so that if it went down, he could pick it up. [Laughter.]

And that may be an appropriate predicate for the question that I'm going to ask. It seems to me that we focused our diagnosis on the day that the patient had a severe heart attack and that really we ought to look back over a longer period of time and try to better understand what were some of the life-style circumstances that got the patient into the point that he had the heart attack.

In that context, we have this continual tension between the private driven desires of those who are participants in the marketplace and what have been broader public policy goals that we're trying to achieve for the total economy. And that tension is constantly tested by changes in technology, such as the enormous capacity which now exists which didn't exist 50 years ago for trading in securities, the greater amount of information which is available, the internationalization of markets and a whole series of other things that we could list.

CURRENT AND FUTURE PRIORITIES

With that background, what do you—how do you assess the current and the likelihood future priorities in terms of public policy that the marketplace is intended to serve and how well do events of the last months and years indicate that those public policy interests are being served?

Mr. **Hineman**. Well, that goes right along with what we were just talking about a little bit ago, and I think that is an excellent public policy question to raise, and it is one we're going to have to resolve. You know, in essence, we're having growing pains in these markets in this area. We have new types of customers we're having to serve. They are the large institutional customers. You know, the owners may be the same, spread over the sheet, as they were before, but we're using the market in different ways. We're buying into mutual funds, and so forth. And as I said, the demands of those institutions are legitimate.

But let me just throw out one philosophical thought. It seems to me that it's much better to dwell on the safe side, for the short run, so that we may have to put on some artificial restraints. And price limits, certainly, have worked well in futures markets. They were put on in the thirties as a result of 1929.

But in the long run, I think we have to look to increasing market efficiencies, taking into account the needs of the market participants and making sure that the markets can serve those needs and serve them in the most efficient, least costly way. I think that's a mandate. I just can't believe anything different than that.

Certainly, we have to look at the public policy and see that the system is not disturbing the rights of the smaller customers. But I think we have to look at it that way rather than trying artificially to stop some process that's operating out here and say, you've got to quit, because we don't have any room to accommodate you. I think the burden is on us to find ways to accommodate those legitimate business needs.

Senator GRAHAM. The concern that I have, in terms of public policies, it seems to me that a tradition of this country has been investing for the future and delayed gratification and encouraging people to take a longer view and that one of the consequences of many of the new developments that I briefly listed has been to shorten that perspective and create a condition in which people are encouraged to take actions which are going to be evaluated at the next quarterly statement or maybe even in tomorrow's Hong Kong Stock Exchange consequences.

I am concerned that some of the things that the markets have fostered have contributed to that, and I would specifically say the index trading of securities futures.

What would be our answer to the devil's advocate who would say that that is an invention which may serve the marginal needs of a few people in stock trading but does so to the disadvantage of the broader economic need to encourage a longer range view of economic consequences?

Mr. HINEMAN. I think that's an argument that is very definitely worthy of the host of studies that I'm sure academia will do, and should do, with the data that we have been able to supply them, in the coming years. But I think before we make an indictment and before we make a diagnosis that that's exactly what happened, again, I just have to say let's go back to the data and make sure. Because it's such an easy target to blame, but we need to be careful of that.

Senator GRAHAM. I agree.

Mr. HINEMAN. I think we need to do something about it.

Senator GRAHAM. That's why I phrased it in the context of the devil's advocate, so I could disassociate myself [laughter]—or distance myself from the question.

Your background also includes being a veterinarian.

Mr. HINEMAN. That is correct.

Senator GRAHAM. If, as a veterinarian, you are called to the dairy farm because a number of cows are suddenly infected with mastitis, one of the things that you might be asked by the farmer is, what are the conditions on the farm that caused all my cows to get sick. And maybe I'm asking you, as we look at the mastitis problem, that we also ask you, as the veterinarian, to look at the total farm and give us some recommendations from your special position of professional expertise as to what we can do to avoid that contagion in the future.

Mr. **Hineman**. You know, the philosophical question of the large institutional traders, and whether they should be there, I think we have pretty well talked through that.

Let's take a look at the issue of—and I think this is about where your question is, if I understood it right—let's take a look at the issue of what are some of the things that we are thinking about, what are some of the things that I think ought to be done, to take a look at these markets and see what needs to be done.

Of the two most crucial things that I see needing the most immediate attention, one is the collection of data and the rapid transfer of data in the clearing systems. That is No. 1. You've got to find out where the credit is in the system, if it's there. And I don't think that has to be common clearing, but I think it has to be a better, quicker assimilation and sharing of information across markets and across national boundary lines.

Concerning this issue of internationalization, I couldn't agree more with Chairman Ruder, it is real, and it is here. When you see these large brokerage firms that also have assets in Hong Kong and in Zurich and in London, that is one of the reasons I think this information sharing issue is cardinal. We have to resolve this, and we don't have time to do all the philosophical things before we do this. This must be done, and I think it is doable by a coordinated effort.

The second issue, I think, is in the circuit breaker area. We're doing all of these studies and trying to figure out different mechanisms that might make this market cushion down more. I don't know for sure if people really want to tilt this market in favor of one group of traders away from another group of traders. I doubt if that is what they really want to do, but it needs to be looked at—the concerns of the small traders. But in the long run, I think what the market is really saying, and I believe it was the Brady report or it might have been the SEC report—that said preventing a recurrence of October 19 is cardinal, that a recurrence of that is unacceptable.

If we believe that, then I think there is only one way to stop such an event, and that is a circuit breaker, one that works. And pick a number. Are we comfortable with a 100-point drop in the Dow? Are we comfortable with 200, 300, 400? What is it we would allow less than 500? And put it on there and make it work. That is doable. But it has to be on both sides of the market.

Now I understand the problem of doing exactly the same thing in that area on the stock market side. And this is one of the fallacies. We seem to think that we can do all of these things the same on both sides. And the fact is, we can't, because these markets are different.

Senator **Graham**. That's right.

Mr. **Hineman**. But we can get circuit breaker mechanisms that will coordinate and move together. I think it is important that if we implement a mechanism that unplugs one of the markets, we have to unplug the other one, or we get them out of synch. Then the arbitrageurs, who are the spring that try to bring these markets together, have a horrible job.

There is nothing to say that stopping the futures market at 100, will change the market psychology, because we can't assume that stopping that one market stops the market psychology. Let's assume that the stock market decides that the bears are still in control, and it goes down another 200. I think it is clear that in these markets, whatever we do in the way of circuit breakers, must be in unison.

To me, that seems a very strong principle.

I don't know if that answers your question, but maybe it came close.

Senator GRAHAM. Thank you.

Senator RIEGLE. Senator Dixon.

Senator DIXON. Well, Mr. Chairman, I want to tell you that I think that your testimony has been very, very helpful, and I think your common sense approach to many of these problems illuminates some of our issues for members of the committee, and I just want to say to you that I regret that more of us could not have been here during the time of your testimony.

I want to go over this a little bit with you, because there will be a tendency on some of those on the committee to look too carefully at the Brady report, headed by our colleague, former Senator Brady. He suggests four priorities. And I wanted to talk to you about those, not necessarily in the order of priority, because he even prioritizes the priorities here, but let's begin—I want to begin with the margin thing.

You and I have talked a little bit in the past about margins. He says the second intermarket issue is margin requirements. Now he says the task force concluded that margins across marketplaces should be harmonious but not necessarily identical. You'd agree with that?

Mr. HINEMAN. Yes. There's a difference.

Senator DIXON. Between the New York Stock Market and the futures industry in the city of Chicago, but we want harmony and a sensible relationship, but that doesn't necessarily mean you've got an identical number.

Is that correct?

Mr. HINEMAN. Yes

Senator DIXON. Then by now I think the committee knows and understands that contrary to what might have been earlier suggested, the margin isn't 50. For the professional person there in the market, the margin is 20 to 25 percent on the New York Stock Exchange.

Now the fact is that my information is that on October 20, and I have the numbers here somewhere, both the Mercantile and the Board of Trade were substantially above that number. One was 38 percent and the other was 51 percent. Yes. Merc was 38, Board of Trade was 51.

Do you have any documentary support for the numbers that I have been using in that regard?

Mr. HINEMAN. Sir, I do not have. We will go back through the data and see what we have on that, and we will send it to you, but I do not have it at the tip of my tongue or within my reach.

Senator DIXON. I'd like that number.

Now beyond that, on the margin question I'll ask you this. You represent the CFTC. You folks have the expertise in the area of the futures industry. Chairman Ruder represents the SEC. They have the expertise in connection with the stock market.

I'll ask you whether you learned gentlemen and the folks that you represent on your two Commissions couldn't work out something in relation to this margin requirement in an interagency manner that would be satisfactory to protect the industry as a whole and the investors in this country.

Mr. HINEMAN. Senator, that's absolutely right, and we have done an awful lot of coordination, ever since these markets evolved. And in the area of information generation I don't think there's any question that the systems at the CFTC are far superior, and the Brady report said that too, and we have shared that information. There has been a lot of sharing back and forth and it has been very harmonious, and I see no reason why all of a sudden the harmony and the ability to sit down and work these things out is going to disappear. I think very strongly the other way. It can and will be done.

Senator DIXON. Now the first and fourth points that my friend, the Senator, makes in his report are that first clearing and credit mechanisms need to be unified across market segments, and last, the need for better information systems is obvious, if someone is to monitor the intermarket trading strategies that are significant to the one-market system.

You don't have any argument with those conclusions.

Mr. HINEMAN. Not at all.

Senator DIXON. But the Fed doesn't want to do that. The Fed has come here through Mr. Greenspan, its Chairman, and said it doesn't want to do that.

I'll ask you whether the CFTC, working in conjunction and in harmony with the SEC, you, as the Chairman of the CFTC, and Mr. Ruder, as the Chairman of the SEC, and the folks that you work with can't work out those things in a satisfactory manner, to protect the investor in this country.

Mr. HINEMAN. I'm confident we can.

Senator DIXON. Now the final thing I want to talk to you about is the circuit breaker question. It is a fact, is it not, that the futures industry actually employs in its own way within its industry that kind of a concept?

Mr. HINEMAN. They did, and just recently they enacted those price limit rules, which then have to come to the CFTC to be approved, and we approved those rules.

Senator DIXON. And you have no problem about talking with Chairman Ruder and the SEC, so that on an intergovernmental basis between your two agencies, you can work that out in a satisfactory manner to serve and to protect the investors of this great Nation?

Mr. HINEMAN. Yes, sir.

Senator DIXON. Now let's just find out this final thing.

This is a global market, and they've got these same kind of conditions in London, Tokyo, Hong Kong, Zurich and a lot of other places in this world; isn't that right?

Mr. HINEMAN. That's correct.

Senator DIXON. And to the extent that we ever do these things, we have to be mindful of those things, if we want to retain this great industrial base that we have in this marketplace in this country; isn't that true?

Mr. HINEMAN. I think that is true.

Senator DIXON. And you would do that with your expertise and your understanding, working with Chairman Ruder, so that we do protect our marketplace in this country and don't give it away to London and Tokyo and those countries; is that right, those cities?

Mr. HINEMAN. Yes, sir.

Senator DIXON. Now as I understand it, really London and Tokyo, while they have a futures in government bonds, don't even now have a futures industry in respect to the stock market; is that true?

Mr. HINEMAN. That's correct, but they're just getting off the ground with their futures markets, and they are beginning to mushroom.

Senator DIXON. Sure they are. They are looking at it. Now when they blamed the futures industry for part of this experience, the market dropped just as much in Tokyo, and the market dropped just as much in London without those futures markets; did it not?

Mr. HINEMAN. It did.

Senator DIXON. Remarkable, isn't it?

Mr. HINEMAN. I would say, concerning that point, that I don't think there is any question but that it is proof that markets are international now. If we harbor any ideas of isolationism, that should dispel them. Because what happens here is so much an integral part that it has an echo every place around the world, and we need to remember that in all categories.

Senator DIXON. I thank the Chair.

Senator RIEGLE. Thank you, Senator Dixon.

If memory serves me right, the market in London did not drop as much, partly because they have price limits there; is that true?

Mr. HINEMAN. Tokyo has price limits. London does not.

Senator RIEGLE. Then it would be Tokyo that I am thinking of rather than London?

Mr. HINEMAN. Yes. They have price limits.

Senator RIEGLE. Is the observation correct that, in fact, those price limits had the effect of dampening down the degree of drop?

Mr. HINEMAN. I don't think there was any question but that it feathered the drop. As I said, does it change the economic fundamentals? Does it change where you are finally going to go? Only to the extent that it gives people time to stop and think.

Senator RIEGLE. Let me ask you two other specific questions, and then we will wrap up the hearing today, unless Senator Dixon has more that he wants to get into.

Can you tell us how many cases of frontrunning you have had to pursue within the CFTC in recent years, and what specific steps, if there are any, that you now perceive that you're going to take to really examine that problem, and, to the extent it exists, deal with it?

TRADING AHEAD OF A CUSTOMER

Mr. **Hineman**. Let me say, first, that the futures markets don't have the same kind of thing that is traditionally considered as frontrunning. We have trading ahead of a customer. We have dual trading, and we do have strict regulations, and so do the exchanges, against trading ahead of a customer. I can get you the information as to how many of those cases have been pursued, and there have been some. I will have to send you that data. But let me also assure you that we are very much concerned about the allegations of frontrunning, where ostensibly they have stock to sell on the stock side and come over and take a short futures position ahead of time, and thereby are advantaged.

Let me also add that our informational system gives us good data on what the large traders are doing, good data based on the time sequenced audit trail, as to exactly what time of day the futures trades happened. We need corresponding data on the other side, before we can draw conclusions about what happened exactly.

This is another one of those areas where there needs to be that intermarket coordination, and I see no reason in the world why this coordination cannot happen. But I agree with David Ruder, when he said the securities side needs to get something like our large trader reporting system and some of these other systems, so we can get the data. You know, when you go after one of those allegations, you need to have the data, so you can bring the case and prosecute. We do have laws that would allow us to pursue frontrunning.

Senator **Riegle**. So if I understand you correctly, you are saying that you do not now have the data collected in one place that would tell you whether there was substantial cross-market frontrunning.

Mr. **Hineman**. Our staff has looked at this issue, and as of yet, have not found anything that indicates to them that there has been frontrunning. That is not a final conclusion. As we get further information on the other side, we will be looking more.

That is the way it is in this business. An awful lot of this data is computerized. It is available, and if something triggers a question, you go back and look again. But right now, we do not feel comfortable with the data on the other side, the securities side.

Senator **Riegle**. Have you asked for the data on the other side?

Mr. **Hineman**. We don't have that period of time in October. We don't have that routinely.

Senator **Riegle**. No, but have you asked for it? I know, but you know, the market went down $1 trillion in value.

Mr. **Hineman**. We did ask for it—excuse me. I'm wrong. We do have it. We did ask for it, and we do have it for October, and in the October data—nothing was found?

Ms. **Corcoran**. We didn't find anything specific, but we have been advised, at least certain SEC staff have said, that they are looking at some cases of activity which they describe as "nonclassical" instances of frontrunning. This suggests to me the possibility that we wouldn't have spoted that anyway, and we certainly would like to talk to them about what they are looking at and share with them an approach to that.

Mr. **Hineman**. That will be done.

Senator **Riegle**. Let us have you identify yourself for the stenographer's record, please, the woman who just spoke.

Mr. **Hineman**. This is Andrea Corcoran, the Director of the Division of Trading and Markets of the Commodity Futures Trading Commission.

Senator **Riegle**. All right. Now if I understand the response correctly, that the SEC—you have some indication from the SEC that they see an unusual pattern here that would suggest to them cross market front running, but so far, at least, I gather the level of the discussion back and forth and the data that you would need to make an independent assessment, either there hasn't been much discussion, you don't have the data.

Where precisely are we?

Ms. **Corcoran**. They were preparing their reports contemporaneously with us, and the first order of the day was to basically explain what happened in the market and to address financial integrity, and then the second order of the day was to look at potential trade practice abuses, because you do have time to address those. Those are less urgent concerns. I think our report said that not only would we communicate with the SEC specifically, about any data that they had, but also that we would separately look at the question of what trading patterns in the futures market ought to trigger an inquiry into whether there was front running on the securities side, and separately, that we would look into the question of whether it is possible to develop a rule or a regulation that would set a minimum standard in that area for intermarket activities.

Senator **Riegle**. So is it fair to summarize your comment to the effect that this is an area that you now have under careful examination. You are collecting the data. You are now preparing to talk to the SEC, and if you find that there is a pattern here that is a problem, you are prepared to take action; is that correct?

Ms. **Corcoran**. That would be correct.

Mr. **Hineman**. Yes, sir.

Senator **Riegle**. What is the timeframe over which you are likely to have answers to that? Is this something that will happen within the next 30 days or 60 days? Are there meetings planned?

Ms. **Corcoran**. Well, I would say that we will turn our attention to it right away, but that it is very difficult to determine how long an investigation will take, and when you investigate a market and make public your conclusions you are likely to run into criticism that you didn't investigate it long enough.

Senator **Riegle**. Well, I would appreciate it—we will talk to the SEC, because we have direct oversight there, but I would appreciate——

Mr. **Hineman**. We will keep you informed.

Senator **Riegle**. Yes. I would appreciate it if you would inform us on that issue, specifically.

Let me ask you one other thing. The SEC has noted, allowing futures to open before stocks puts great stress on the specialist system.

I am wondering if you agree with that, and if so, what, if anything should be done to perhaps better coordinate the openings between futures and stocks?

Mr. HINEMAN. I don't have strong views on that, and I think we need to take a look at it. I am willing to take a look at it, and I will do so with an open mind.

Senator RIEGLE. Senator Dixon, do you have anything else?

Senator DIXON. Just one final thing, and again, I thank the Chairman for his very informative testimony.

I would just be interested in having from your staff folks at an early date, as soon as it is convenient for you, the answer to these questions.

In Tokyo and in London—you don't need to look at all the different cities around the globe, but in Tokyo and London, to the extent that they have margin requirements, what are they? You have indicated Tokyo does, London does not. I don't need that answer now——

Mr. HINEMAN. We will get you that information.

Senator DIXON [continuing]. But to the extent that they have margin requirements, let's say, in Tokyo, what are they?

Second, are they self-imposed? Does the industry police itself and impose these standards, or is it a governmental law passed by the Diet?

Then in the case of both Tokyo and London, do either of those markets have circuit breakers? If they do, first, is it a self-imposed discipline by the market itself, or is it imposed either in the case of London by the Parliament or in the case of Tokyo by the Diet?

Could I have those at your convenience?

Mr. HINEMAN. Yes, sir.

Senator RIEGLE. Anything else, Senator Dixon?

Senator DIXON. I thank the Chair.

Senator RIEGLE. We appreciate your testimony today, and we look forward to further discussion.

Mr. HINEMAN. All right.

Senator RIEGLE. The committee is in recess.

[Whereupon, at 1:20 p.m., the hearing was adjourned.]

“BLACK MONDAY,” THE STOCK MARKET CRASH OF OCTOBER 19, 1987

THURSDAY, FEBRUARY 4, 1988

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 10 a.m., in room SD–538, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Riegle, Dixon, Sasser, Sanford, Shelby, Graham, Garn, Heinz, D'Amato, Hecht, Bond, and Karnes.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

Today the committee welcomes the leaders of four of the self-regulatory organizations in Chicago, New York, and Washington. As we collect and study reports and listen to the testimony from figures such as Nicholas Brady and SEC Chairman David Ruder and Federal Reserve Board Chairman Alan Greenspan, it becomes increasingly clear that our market mechanisms demand repair. Each of these experts has made a careful study of our securities markets. Each has called on us to act.

Our committee must weigh exactly what reforms to adopt. This morning we focus on the role of the self-regulatory organizations. Prompt action of the National Association of Securities Dealers to improve small order execution in the futures exchanges to adopt price limits are encouraging. We also must recognize the reality that our markets demand more formally coordinated regulation.

Gentlemen, we are very happy to have you here. Our witnesses are Mr. Leo Melamed, chairman, executive committee, of the Chicago Mercantile Exchange in Chicago; accompanied by John Sandner, chairman of the board of the Chicago Mercantile Exchange; and William Brodsky, president and CEO of the Chicago Mercantile Exchange.

There may be some statements the members would like to make. Senator Garn.

OPENING REMARKS OF SENATOR GARN

Senator GARN. Mr. Chairman, I have no statement other than to say that I am pleased with how the hearings have gone so far. I think they have been very informative and helpful to the committee in our deliberations and I wish to welcome these gentlemen from the Chicago Mercantile Exchange.

The **Chairman**. Senator Riegle.

OPENING STATEMENT OF SENATOR RIEGLE

Senator **Riegle**. Mr. Chairman, I do have a brief statement and I again will reflect some views serving as I do as the chairman of the Securities Subcommittee, and that is that I very much look forward to hearing today from all of the self-regulatory organizations that are coming and, as well, from the New York Stock Exchange tomorrow.

I think our witnesses today can give us a view from the trenches as things were really in the process of melting down, if you will, that will be very important for us and very illuminating.

I think we all respect very much the individual outlooks and requirements that go on in each area of the market. I think at the same time it's important that we, all of us—those that are in self-regulatory organizations and those of us in the Congress—think together as to how the system fits together and how we make it work so that it really serves the public interest.

I want to say one other thing with respect to the witnesses that are before us because on Tuesday, the day that the markets were most severely tested, Mr. Melamed, you and I were on the phone at about 12:20 or thereabouts—I don't remember the precise time—but it was at the moment at which it appeared that the markets as a whole were in the process of shutting down. Some were and it looked as if all might. And during that day I was talking with a number of major participants but you and I happened to be on the phone at that particular time and I don't know that I'll ever forget the discussion because of the tension and the stakes that were involved if the markets had in fact completely closed.

One of the things that I will ask you to do later, if you don't do it in your own statement, is to try as best you can to help reconstruct for us exactly what did take place. In other words, I'm interested not just in the forward look but I think to understand what we might do I think we have to understand a little better the dynamics of why the market system was in that kind of grave difficulty at that time, what your assessment of that is, and of course then, from that, what lessons we draw in terms of avoiding getting back to that point or a worse point in the future.

Mr. **Melamed**. I will be happy to.

Senator **Riegle**. Good. Thank you very much.

The **Chairman**. Thank you, Senator Riegle.

Senator Hecht.

OPENING STATEMENT OF SENATOR HECHT

Senator **Hecht**. Thank you, Mr. Chairman.

Just briefly, I have been quoted in the Washington Post this morning saying I feel legislation at this time is absolutely premature. I just want to say that is exactly what I said and that is exactly the way I feel. I think these gentlemen that are going to appear before us today acted in a very, very professional manner under the worst possible conditions. The system worked. I think we have to analyze whether we need regulation or legislation, if any, and we must act very, very cautiously. We have a great system in place and we must be very, very careful not to disassemble that system.

The **Chairman**. Senator Hecht, to go back to the way you introduced your remarks this morning, I think this is the first time I can recall any political figure saying he was correctly quoted in the press. Congratulations. [Laughter.]

Senator Dixon.

OPENING STATEMENT OF SENATOR DIXON

Senator **Dixon**. Mr. Chairman, I'm pleased to be here this morning as the Banking Committee continues its oversight hearings into the causes of last October's stock market crash. We have a distinguished group of witnesses before us today and I look forward to their testimony. I am particularly pleased to see my constituents and friends from the Chicago Board of Trade and the Chicago Mercantile Exchange here.

I am sure the committee will find their comments and recommendations to be very helpful as we work to achieve a package of appropriate responses to last October's market break.

If we are to arrive at an approach that makes sense and will work to ensure greater long-term stability in our markets, we should investigate and understand the whole range of market changes that helped contribute to last October's stock market crash.

Henry Kaufman, the managing director of Salomon Bros., has an article in today's Washington Post that points to further areas that we need to review. In an article entitled "The Dangerous Volatility in the Financial Markets Isn't Going Away," he argues that there are at least five areas we need to understand and to adjust to if we are to minimize the risk of future episodes of dangerous volatility in securities and currency prices.

One, financial deregulation; two, financial innovation; three, the globalization of financial markets; four, the increasing institutionalization of savings combined with the increasing securitization of markets; and five, the increased use of securities as a vehicle to try to achieve economic stability.

Our efforts to date, unfortunately, have concentrated on the first two of these areas, and even in these areas our efforts have been somewhat incomplete.

I think it is essential, for example, that we hear from market users, traders, pension funds, mutual funds and others before we act. Some have argued that we need to act right away pointing to Senator Brady's testimony that we could potentially be facing another episode similar to what we experienced last October.

However, I would remind you that both Chairman Greenspan of the Federal Reserve Board and Chairman Ruder of the Securities and Exchange Commission disagree with that assessment. They have both stated that the risks of a further market crash are much diminished both because the market is no longer overvalued as it was last summer and because last year's market break taught a lesson to market participants and has made them more cautious.

Their statements do not relieve this committee, of course, of its responsibility to act. However, it seems to me that what they are telling this committee, Mr. Chairman, is that we have the time to do the job right and that we do not have to take the risks involved in acting hastily.

There's a lot at stake. Confidence in our future financial markets has got to be of paramount concern. Because the issues involved are so important, however, we cannot afford to make any mistakes. And that means that we must take the time to fully understand all the factors that helped contribute to the market break and that we must take the time needed to formulate solutions that won't create a whole new range of problems.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Dixon.

Senator D'Amato.

Senator D'AMATO. Mr. Chairman, I would like permission to enter my remarks into the record as if read in their entirety.

The CHAIRMAN. Without objection, so ordered.

OPENING STATEMENT OF SENATOR D'AMATO

Senator D'AMATO. Mr. Chairman, I'd like to welcome my good friend, Leo Melamed, and his associates here today. Leo, as you know, might be considered the guru—the godfather of indexing future trading and I would be particularly interested in his assessment as to what role this played or didn't play, what we can do to bring about stability in the marketplace, to hear his comments as it relates to those who have called for increasing the margin requirements, and last of all, Mr. Chairman, I would like to associate myself with the general outline which was presented by Senator Dixon as it relates to getting all of the facts before we rush in some legislative area that exacerbates the problem and that does violence to the markets.

I think it's extremely important that we not just take the conclusions from one report, no matter how esteemed the group, the Brady Commission and others, might be. I think the conclusions that were reached in that report are out of touch in certain cases with the facts contained in the report. I wonder if the people who made those conclusions read and looked through the documentation, to be quite candid with you.

So I think we shouldn't be rushed into judgment and I would look and would hope that the various regulators and self-regulators and the various institutions themselves begin to address some of those problems with meaningful action. And I note today in the Wall Street Journal, "Future Markets in Chicago Offer Own Reforms." I think this is the kind of thing that we look to and I commend the chairman for calling these hearings.

[The complete prepared statement of Senator D'Amato follows:]

STATEMENT OF SENATOR ALFONSE M. D'AMATO

FEBRUARY 4, 1988

THIS MORNING WE ARE FORTUNATE TO HAVE 4 PANELS OF WITNESSES WHO REPRESENT THE VARIOUS SELF-REGULATORY AGENCIES. HOPEFULLY, THE SRO'S WILL PLAY A CRUCIAL ROLE IN DEVELOPING THE COORDINATED RESPONSE TO THE PROBLEMS WHICH HAVE BEEN IDENTIFIED IN THE VARIOUS REPORTS SUBMITTED TO THIS COMMITTEE.

I ESPECIALLY WANT TO WELCOME MY GOOD FRIEND LEO MELAMED TO, WHAT I BELIEVE IS, HIS FIRST APPEARANCE BEFORE THE BANKING COMMITTEE. SINCE MANY EXPERTS CONSIDER INDEX FUTURES TRADING AS LEO'S BRAINCHILD, MAYBE HE WILL FAVOR US WITH A LUCID DESCRIPTION OF THE USE OF MARGIN IN THESE MARKETS. DURING OUR LAST TWO HEARINGS WE HAVE DISCUSSED THE NEED FOR GREATER COORDINATION BETWEEN MARKET PARTICIPANTS AND THEIR REGULATORS. LEO AND THE OTHER REPRESENTATIVES OF THE COMMODITIES AND SECURITIES INDUSTRIES KNOW SUCH COORDINATION IS NOT A PIPEDREAM. CERTAIN PROVISIONS OF THE GOVERNMENT SECURITIES ACT OF 1986 ESTABLISH A PRECEDENT FOR COOPERATION BETWEEN THE FUTURES AND SECURITIES MARKETS AND THEIR RESPECTIVE REGULATORS.

I HOPE THAT THE VARIOUS EXCHANGES REPRESENTED TODAY WILL WORK WITH THE FEDERAL REGULATORS BY FORMING A TASK FORCE THAT WILL IMPLEMENT THE REFORMS NEEDED TO AVOID THE NEAR BREAKDOWN SITUATION THAT OCCURRED ON OCTOBER 20, 1987. THE CONCEPT OF SELF-REGULATION LIES AT THE VERY HEART OF BOTH THE COMMODITIES AND SECURITIES MARKETS. INVESTOR AND CONGRESSIONAL FAITH IN THE CONCEPT OF SELF-REGULATION HAS NOT BEEN MISPLACED IN THE PAST. THE FAILURE OF MARKET PARTICIPANTS TO FULFILL THE OBLIGATIONS REQUIRED BY A SYSTEM OF SELF-REGULATION WILL CERTAINLY RESULT IN CONGRESSIONAL ACTION.

CONGRESS WILL EITHER EXPAND THE MANDATE OF THE SEC OR THE CFTC OR, EVEN MORE REGRETTABLY, GIVE SUPER REGULATORY POWERS TO A NEW AGENCY OR THE FED. A FAILURE TO ACT BY THOSE WHO BEST KNOW THE COMPLEXITIES OF THE SECURITIES AND FUTURES INDUSTRY WILL INVITE CONGRESSIONAL INTERVENTION AND WILL DO NOTHING TO ENHANCE INVESTOR CONFIDENCE.

I HOPE TODAY'S HEARING DOES NOT DEGENERATE INTO A FINGER POINTING EXERCISE. RATHER, IT SHOULD SERVE AS THE FIRST IN A SERIES OF MEETINGS DESIGNED TO IDENTIFY AND IMPLEMENT THOSE "REFORMS" WHICH WILL EXPEDITE THE INTEGRATION OF THE VARIOUS COMPONENTS OF THE ONE LARGE CAPITAL MARKET ACKNOWLEDGED BY THE BRADY COMMISSION, THE SEC AND THE CFTC REPORTS.

The CHAIRMAN. Senator Sanford.

OPENING STATEMENT OF SENATOR SANFORD

Senator SANFORD. Mr. Chairman, I have a statement that I will, with permission, put in the record.

The CHAIRMAN. Without objection, so ordered.

Senator SANFORD. This is the day that we have before us the organizations that are charged with self-regulation. I, first of all, congratulate them for the good job of self-regulation that I think has been done over the years and to say that we are counting on them to come up with most of the needed solutions to the extent that solutions are required.

I would especially like to note the presence of Kenneth Leibler, the president of the American Stock Exchange, because I had the pleasure and challenge of serving as a public Governor for a number of years before coming to the Senate. So I welcome him especially, but all of the representatives of the self-regulators have got a great deal to contribute to what we need to learn.

[The complete prepared statement of Senator Sanford follows:]

OPENING STATEMENT OF SENATOR TERRY SANFORD
HEARING ON THE OCTOBER STOCK MARKET CRASH
THURSDAY, FEBRUARY 4, 1988

Thank you Mr. Chairman. I appreciate the opporunity to hear today from a number of our essential self-regulatory organizations. I believe that they are to be commended for carrying much of the burden of policing our securities markets and for the generally excellent job they have done in that role. If we are to come to a consensus on what steps to take to prevent another market crash, I believe it must come through working closely with our self-regulatory organizations.

I, like you and many others on the committee, Mr. Chariman, would like to see our regulatory organizations, the SEC, the Federal Reserve, and the CFTC come up with agreed upon proposals for change, but I would hope that our self-regulatory organizations would be prominent players in the development of those plans. Obviously, if disputes cannot be resolved, then we must take action to ensure a more coordinated regulation of our various markets.

I am particularly pleased to welcome to the committee Ken Leibler, president of the American Stock Exchange. I had the pleasure and the challenge of serving on the board of the American Stock Exchange before being elected to the Senate and watn to welcome Ken this morning.

I look forward to the testimony of each of our witnesses. Thank you, Mr. Chairman.

The **CHAIRMAN**. Thank you.

Senator Bond.

OPENING STATEMENT OF SENATOR BOND

Senator **BOND**. Thank you very much, Mr. Chairman.

I join in welcoming the distinguished witnesses today and we do have a great deal of talent before us, people with experience in how the markets work. We congratulate you not only on the regulatory efforts that you've undertaken but specifically on the changes that you have considered and brought into place as a result of the events of October 1987.

I think I can speak for most of the members of the committee. I've already heard many of them say that we would continue to encourage you to work on what you see as needed reforms in the marketplace and to work with the other markets as well to make sure that a reform that is put in place in one area is not circumvented by the failure of other of the markets to adopt similar reforms.

What we're talking about here is really the capital formation and job creation which is essential for the future economic growth of this country and the provision of good jobs for the working men and women of America.

I am concerned that we have seen a good bit of panic among those individual investors who really are the backbone of investment in this country. If the individual investors think that market volatility and uncertainty about their ability to execute trades causes them to put their money elsewhere, it not only will cost business for those of you who are in the markets but it will hurt our economy severely. I know you all have an appreciation for the importance for making the market machinery work. We are willing, if necessary, I'm sure on this committee to push for needed legislative reforms but we would like to see, I think all of us would like to see as much of the corrective action as possible taken by the participants in the market themselves who are probably far better able to tune the solutions to fit the problems that have been defined.

With that, I say that we are looking forward to your testimony today and to the discussion that we'll have. Thank you for joining us.

The **CHAIRMAN**. Senator Shelby.

Senator **SHELBY**. Mr. Chairman, I have a written statement that I would ask unanimous consent to have inserted in the record.

The **CHAIRMAN**. Without objection, so ordered.

OPENING STATEMENT OF SENATOR SHELBY

Senator **SHELBY**. Leo, most of us know you here and know you are very active and brought so many new products to the market. In some of your testimony that you have prepared for delivery here and others you talked about the derivative markets and the trading strategies that exist because of these markets have received so much attention over the past few months. You also noted and remind us I guess you would say, remind this committee, that a lot of the overseas markets with no derivatives or fewer suffered just as much as this market did. I'm sure you will get into the details of that. I believe that suggests there's culpability elsewhere.

And the other thing that bothers me is the Brady report says we ought to have the Federal Reserve. They're the logical person or group to come in and monitor it all and control it all, and the Federal Reserve Chairman said, "No, we don't want it."

So, Mr. Chairman, I look forward to the comments.

[The complete prepared statement of Senator Shelby follows:]

STATEMENT BY SENATOR RICHARD SHELBY
FEBRUARY 4, 1988

MR. CHAIRMAN, THANK YOU FOR SCHEDULING SUCH AN EXCELLENT PANEL OF WITNESSES TO TESTIFY BEFORE US TODAY.

CHAIRMAN MELAMED, I HAVE READ YOUR PREPARED COMMENTS WITH INTEREST. THE DERIVATIVE MARKETS AND THE TRADING STRATEGIES THAT EXIST BECAUSE OF THESE MARKETS, HAVE RECEIVED MUCH ATTENTION OVER THE PAST FEW MONTHS. IN YOUR TESTIMONY YOU REMIND THIS COMMITTEE THAT OVERSEAS MARKETS WITH NO OR FEW DERIVATIVE PRODUCTS SUFFERED AS SEVERELY AS OUR MARKETS DID FROM EXTREME VOLATILITY. THIS SUGGESTS THE CULPABILITY MAY LIE WITH OTHER FACTORS. MANY OF THE SAME RECOMMENDATIONS HAVE EMERGED FROM THE VARIOUS AUTOPSIES, INDICATING A NEED FOR SEVERAL MECHANICAL IMPROVEMENTS. HOWEVER, I DO NOT WANT TO SEE CONGRESS ENACT BAND-AID LEGISLATION MANDATING SUCH IMPROVEMENTS, WHILE FAILING TO ACT ON THE MANDATE THAT THE MARKET CRASH HAS GIVEN US, TO CLEAN UP THE ECONOMIC FUNDAMENTALS.

ATTACHED TO YOUR COMMENTS YOU CITE A NUMBER OF SPECIFIC PROPOSALS TO ENHANCE THE INTEGRITY OF THE FUTURES MARKETS. THESE PROPOSALS SEEM A POSITIVE STEP IN THE RIGHT DIRECTION; I HOPE YOU WILL GIVE US AN IDEA AS TO WHEN THEY WILL BE IMPLEMENTED.

TODAY THE BOARD OF THE NEW YORK STOCK EXCHANGE WILL VOTE ON A RULE THAT WOULD LIMIT THE USE OF DOT BY BIG WALL STREET FIRMS DURING PERIODS OF EXTREME VOLATILITY. THE BRADY COMMISSION REPORT CITES THE FAILURE OF DOT AND THE SUBSEQUENT PREVENTION OF INDEX ARBITRAGE AS LARGELY RESPONSIBLE FOR DISCONNECTING THE FUTURES AND EQUITY MARKET AND THUS EXACERBATING THE FALL. I BELIEVE ALL REPORTS HAVE CALLED FOR GREATER CAPACITY IN THE AUTOMATED SYSTEMS THAT RUN THE MARKET; I WOULD APPRECIATE YOUR OPINION ON THE WISDOM OF LIMITING THE USE OF DOT IN TIMES OF EXTREME VOLATILITY.

MY LAST CONCERN IS THE PRIMARY RECOMMENDATION OF THE BRADY REPORT THAT THERE BE A SINGLE REGULATOR FOR CRITICAL INTERMARKET ISSUES. THE BRADY NOMINEE, THE FEDERAL RESERVE BOARD, DOES NOT WANT THE JOB. YESTERDAY CHAIRMAN RUDER ARGUED THAT THE SEC SHOULD HAVE TIE-BREAKING AUTHORITY WHILE CHAIRMAN HINEMAN MAINTAINED THAT THE CURRENT SYSTEM OF EQUAL PARTNERS IS MOST EFFECTIVE. I SEE A SITUATION WITH TOO MANY CHIEFS AND NOT ENOUGH INDIANS. WE NEED ONE CHIEF, ONE REGULATOR WITH WHOM THE ULTIMATE AUTHORITY AND RESPONSIBILITY LIES. WE MUST PUT ASIDE TURF BATTLES AND PROVIDE FOR THE EFFECTIVE COORDINATION OF OUR FINANCIAL MARKETS.

YOU HAVE SUGGESTED AN INTERMARKET COORDINATION COMMITTEE; THAT WOULD AVOID A TURF BATTLE. IT SEEMS A GOOD IDEA ON PAPER BUT I QUESTION THE EFFICIENCY OF A REPRESENTATIVE COMMITTEE APPROACH. PLEASE GIVE US YOUR COMMENTS ON THE ABILITY OF SUCH A COMMITTEE PROCESS TO BE EFFECTIVE.

The CHAIRMAN. Before you start, sir, I'd just like to announce that we've had from time to time people appearing before the committee who have requested that their official reports be printed for the record. I understand—we've been checking it—that it would cost several thousand dollars because these reports are very large if we printed them in the record. So we will keep them in the record available for inspection, but we will not print them as a public document.

At this point I will insert the record statements of Senators Sasser and Karnes.

REMARKS OF SENATOR JIM SASSER

Senator SASSER. Mr. Chairman, today we hear from the self-regulatory organizations, those with the first hand knowledge of how their respective markets operate, and those persons who were in the trenches on "Black Monday."

One thing that has struck me, Mr. Chairman, since October 19, is the globalization of the securities markets. Today we have before us representatives of the New York and Chicago markets and the NASD. But the financial markets extend far beyond the scope of even these enormous and important markets.

Certainly, we experienced a global crash. Indeed, we found ourselves waking up those mornings following October 19, to find out how the Tokyo and London markets had performed, or were performing, as an indicator of what our own markets would do. The interdependencies and interrelationships of all markets everywhere was borne home.

Senator Riegle has proposed an international securities regulatory commission to better coordinate and regulate international securities markets. This may be a very good idea.

If we decide to change in any way the operations and regulation for our domestic financial markets, it would have to be coordinated overseas, or changes could be ineffective. Trading could just move offshore, out of reach of our regulation, but as October 19 showed us, it would still affect our own markets.

Thank you, Mr. Chairman.

OPENING STATEMENT OF SENATOR DAVID K. KARNES

Senator KARNES. Thank you, Mr. Chairman. I join my colleagues in commending you and Senator Garn in providing this committee again today with an excellent panel. I welcome those experts who will be testifying today, and I look forward to their insight and advice as we continue to discuss and discover the events surrounding Black Monday and the stock market break.

I think that there may be considerable confusion and misunderstanding about the perceived speculation in the futures market and the impact that the futures market had on the stock market break. I want to compliment Leo Melamed of the Mercantile Exchange and his excellent statement which outlines the important role of the futures market. Chairman Greenspan stated earlier this week that stock prices finally reached levels which stretched to incredulity expectations of rising real earnings and falling discount factors. Something had to give. If it didn't happen in October, the chances are that it would have happened eventually—and sooner rather than later. The immediate cause of the break was incidental. The market break was a confluence of events waiting to unfold.

Mr. Melamed eloquently explains in his statement the important role the futures market plays in capital formation. By providing institutional investors with a vehicle for managing stock portfolio risk, and providing liquidity for "baskets" of stock, the futures market increases the attractiveness of equities as an investment vehicle, thereby indirectly promoting capital formation. The ability to transfer risk has also become a very important tool for large pension and mutual funds representing small investors throughout the country. Let us be sure that we do not severely impair the ability of the futures market to perform their important functions.

Finally, I want to say that after 3 days of testimony of representatives of the individual stock, options, and futures markets and from the Federal agencies responsible for regulating those markets, I am pleased that they all express a willingness and desire to resolve their differences without the need for far-reaching congressional legislation. Mr. Chairman, I urge this committee to give the exchanges and the regulators the opportunity to address the areas where specific changes would correct operating problems and help to restore the investor's confidence in our markets. Thank you.

STATEMENT OF LEO MELAMED, CHAIRMAN, EXECUTIVE COMMITTEE, ACCOMPANIED BY JOHN F. SANDNER, CHAIRMAN OF THE BOARD, AND WILLIAM J. BRODSKY, PRESIDENT AND CEO, CHICAGO MERCANTILE EXCHANGE

Mr. Melamed. Thank you, Mr. Chairman.

Distinguished members of this committee: My name is Leo Melamed. I am chairman of the executive committee of the Chicago Mercantile Exchange. With me this morning on my right is Jack Sandner, chairman of our board of governors; and on my left, Bill Brodsky, who is president and chief executive officer of our exchange, both of whom will assist me in responding to your questions, with your permission.

As you've indicated, Senator Proxmire, we have a written statement and, with your permission, we would like to submit that for the record. At this time, I would like to present a brief oral statement, if I may.

The Chairman. Fine.

EXCHANGE ACTED FLAWLESSLY DURING MARKET BREAK

Mr. Melamed. Mr. Chairman, as you will recall, this is the second time that we have appeared before this committee with respect to the events of October 19. The first time we appeared, just 10 days after the crash, we testified that our preliminary findings indicated that the Chicago Mercantile Exchange carried out its functions as a futures market flawlessly during the week of October 19.

Sir, nothing that has happened since that testimony, no report, no evidence, no record, would contradict the fact of our testimony. Indeed, our preliminary findings that our exchange provided a pressure valve for many American and world investors to hedge their stock risks during the week of October 19 was borne out by the facts.

You have and we all have been subject to many reports that have come before us now, each from a different viewpoint and each from a different motivation. It seems to us that of all these reports, only three can be viewed as truly independent: The one authorized by the President, the so-called Brady report; the one by the GAO; and the report from the Federal Reserve Board.

All of these reports have many points in common and none of them lay any blame on the futures market. In our opinion, the report most likely to gain your attention is the one from the Brady Commission. We understand that. We agree with that.

The Chicago Mercantile Exchange is pleased to advise you that we can and do embrace the central theme of the Brady Commission. That is that the stock market, the stock options market, and the stock index futures markets are all really components of one market. We also emphatically agree that this philosophy requires a great deal of coordination.

Our written testimony explains that there's more than one way to achieve such coordination. It is our opinion that the expertise to achieve that necessary coordination among the markets is found within the markets. Thus, our suggested approach is through the private sector rather than requiring additional regulatory authority.

The Chicago Mercantile Exchange, sir, gives you its pledge to work toward that goal with every other exchange and indeed that is the attempt we are making.

The Brady report recommends that the Federal Reserve Board act as the supercoordinator for the principal intermarket areas of concern. In this respect, our exchange is in accord with the testimony of the Federal Reserve and the CFTC. Our recommendation is for the creation of an intermarket coordination committee comprised of the securities and futures exchanges as well as representatives from the CFTC, the SEC, and the Federal Reserve Board.

This can be achieved by expansion of the existing intermarket surveillance group, the so-called ISG, an entity created and presently operating under the auspices of the SEC.

The proposed committee could then act as a coordinating forum for the sharing of cash flow and trading data among the commodities and securities exchanges. This will include the ability to provide lenders comprehensive information on a clearing firm's position, thereby facilitating bank financing and reducing liquidity pressures of the type that were experienced by some firms during the crash.

This centralized information sharing will greatly enhance the financial integrity of all the exchanges and will facilitate detection of intermarket violations such as frontrunning.

In addition to this recommendation, yesterday the Chicago Mercantile Exchange submitted a comprehensive package of internal trading procedural and financial rules to the CFTC. These proposals are in accord with the Brady recommendations. I would like to highlight them at this time.

RECOMMENDATIONS FOR CFTC

First, Brady recommended circuit breakers. Sir, the CME has proposed a set of permanent daily price limits as well as a new concept of opening price limits. It should be noted that the Chicago Mercantile Exchange was the first exchange to voluntarily impose such circuit breakers long before the Brady report concluded that such a procedure was central to ensuring that October 19 does not recur.

Second, Brady recommended that futures margin and securities margin be rationalized in line with professional margin on securities. While we strongly disagree with this proposal since the function of futures margin is substantially different than that in securities, we nonetheless have proposed the following improvements.

(1) The CME proposes to adopt a new and highly accurate system for measuring options risks.

(2) The CME has petitioned the CFTC to add a risk-based capital requirement that will impose higher charges on firms that represent above average risk.

(3) The CME proposes to substantially increase the level of liquid assets guaranteeing performance by its clearing house.

(4) The CME will maintain its initial speculative stock index margin at a level of approximately 15 percent of the value of the contract. This percentage will bring our futures margin into substantial alignment with the professionals margins on securities.

Third, Brady recommended enhancement of the clearing system and settlement process. The CME will act promptly to resolve the specific problems that interfered with the prompt fund transfers during the crash. In particular, we will modify our intraday pay/collect procedures and coordinate with the other futures exchanges and the Options Clearing Corp.

I submit, Mr. Chairman, that the foregoing represent a substantial step to adopt and carry out the Brady mandate.

Mr. Chairman, allow me now to turn to another aspect of this discussion. That is the underlying nature of our financial markets, their differences from traditional markets, and their global significance.

The Chicago Mercantile Exchange, the Chicago Board of Trade and other futures markets in this country understood that now was the time to create a market to respond to changes in the world technology. We have done that, sir, and we think that our markets are an important element in the world today bringing to this country business that otherwise would go somewhere else. We are jealous of that business, sir. We want to guard it. We want to protect it for these United States, and we don't want to lose it to foreign competitors.

We are pleased to answer your questions.

[The complete prepared stratement of Leo Melamed follows:]

TESTIMONY

OF

LEO MELAMED

CHAIRMAN OF THE EXECUTIVE COMMITTEE
AND SPECIAL COUNSEL TO THE BOARD

CHICAGO MERCANTILE EXCHANGE

BEFORE THE

COMMITTEE ON BANKING, HOUSING ANL
URBAN AFFAIRS

UNITED STATES SENATE

FEBRUARY 4, 1988

* * *

My name is Leo Melamed. I am Chairman of the Executive Committee and Special Counsel to the Board of Governors of the Chicago Mercantile Exchange (CME). Also representing our Exchange today are John F. Sandner, Chairman of our Board of Governors, and William J. Brodsky, our President.

Mr. Chairman, this is the second time I have appeared before this Committee with respect to the events of October 19. When I first appeared, just ten days after the crash, I recognized the importance of your inquiry. However, I was concerned that this Congressional inquiry and the many studies, official and private, that followed would focus attention on the mechanics of the stock market crash and divert attention from the economic causes of the crash.

Clearly, Mr. Chairman, the question of why the market crashed is the more fundamental issue. A national debt of $2.3 trillion, a budget deficit of $148 billion, a trade deficit of $153 billion, and the dollar at historic lows, are concerns that cannot be relegated to second place. The foregoing, coupled with stock prices at historically high levels, certainly created a dangerous financial environment. Moreover, the crash was global in scope and was equally severe in countries that had no derivative markets and in which the strategies blamed in the U.S. played no part. These macroeconomic issues have not been sufficiently addressed, yet they are the real causes of the global stock market crash and continue to threaten severe economic dislocation.

Mr. Chairman, when I appeared before you on October 29, 1987, I testified that during the week of October 19, the CME performed without impairment despite the unprecedented volume and volatility. Nothing that has happened since that testimony, no evidence nor report has contradicted this fact. Indeed, our preliminary findings that the CME provided a pressure valve for a large number of investors to hedge their stock risks, has been borne out by all the evidence.

All reports have concluded, as did our preliminary estimates, that approximately 48,000 contracts, the equivalent of 150 million shares, were sold by institutional portfolio managers at the CME on October 19 and that less than half of this selling pressure was transferred back to the New York Stock Exchange, via arbitrage.

Allow me now to offer a brief synopsis of the important findings of each of the investigative reports on the crash, to examine in what manner, if any, they differ from our own, to review their recommendations, and to respond with our own suggestions.

THE CFTC REPORT

The CFTC provided the first analysis of the crash, publishing its initial report early in November, and recently releasing a final version.

- The report estimated that index arbitrage trading represented approximately 10% of NYSE volume, a conclusion supporting the original CME estimate.
- The report commended futures exchange decisions and performance throughout the crash. It documented the continuous and effective communication between the CME, the CFTC, the SEC, the Federal Reserve Board, and other exchanges including both securities and commodities exchanges.
- The report concluded that futures industry clearing and surveillance operations worked effectively and pointed out that no FCM failures occurred and that no customer funds were lost to default of a clearing firm.

The final CFTC report closely examined the role of various trading strategies in contributing to the crash. The report rejects the contention that index arbitrage and portfolio insurance interacted to cause the crash, citing the following evidence:

- Both portfolio insurance and index arbitrage represented only a small fraction of total equity sales over the period in question. In fact, these strategies were proportionally more important on October 14 than on October 19.
- Much of the heavy selling on the October 19 NYSE opening came from retail sources. One mutual fund group alone sold three times as many shares as all index arbitrage trading combined in the first half hour of October 19.
- The timing of portfolio insurance and index arbitrage sales does not match the timing of major price declines in either stock index futures or stocks.
- Many of the largest price moves during the crash occurred after index arbitrage trading had been halted by NYSE restrictions.

THE COMMITTEE OF INQUIRY STUDY COMMISSIONED BY THE CME

The Committee of Inquiry[1] analyzed the role of the CME S&P futures market during the crash. Its findings, attached hereto as Exhibit A, were based on an extensive analysis of data from a wide variety of sources. The report's major conclusions were as follows:

- The crash was a worldwide event, and futures represented only a small portion of the entire picture.
- Selling pressure occurred simultaneously in both stock and futures markets on the morning of October 19. The Committee rejected the notion that the crash started in Chicago.
- Index arbitrage trading contributed a relatively small fraction of selling pressure to the NYSE, representing approximately 10% of volume. It found no evidence that index arbitrage caused or exacerbated the crash.
- The futures market absorbed a substantial amount of selling pressure that would otherwise have gone to the New York Stock Exchange.

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[1] Merton Miller, PhD., Professor of Banking and Finance, University of Chicago; Myron Scholes, PhD., Professor of Finance and Law, Stanford University; Burton Malkiel, PhD., Professor of Economics, Yale University; and John W. Hawke, Jr., Esq., Arnold and Porter.

- Portfolio insurance did contribute to selling pressure in the futures market, however total portfolio insurance in futures represented only a fraction of total selling pressure in the equity markets as a whole.

THE KATZENBACH REPORT COMMISSIONED BY THE NYSE

The Katzenbach Report was commissioned by the NYSE in the Spring of 1987 to study the role of "program trading." This report, nearly completed at the time of the October crash, does not specifically focus on the issues before us. However, for the convenience of this process allow me to also review its findings.

The Katzenbach study must be distinguished from all the other reports in that its conclusions are based primarily on opinions expressed in interviews, offering almost no hard data or evidence to support its points (although it is our understanding that Professor Sanford Grossman of Princeton University was commissioned to do statistical and other analysis for this study).

The Katzenbach report calls for a number of major changes in the operations of the markets.

- That the NYSE expand its DOT system.
- That there is need for a substantial increase in the margin and capital requirements for futures traders.
- That settlement of index futures contracts be changed to physical delivery.
- That there be a merger of the SEC and CFTC.
- That the NYSE initiate trading of stock baskets.

Katzenbach bases the above recommendations on the assertion that speculative activity in futures markets suppresses investment and capital formation. We do not feel that the report offers sufficient evidence to support any of these conclusions.

For instance, Katzenbach offers no evidence to support the claim that the liquidity, low transactions costs, and ability to hedge created by financial futures inhibit investment in capital markets. Indeed, such a finding runs contrary to the evidence and findings of all other studies. In the Study of the Effects on the Economy of Trading in Futures and Options conducted jointly by the Federal Reserve Board, the SEC and the CFTC (December, 1984), the effect of futures and options trading on capital formation was determined to be positive. In Chapter VI, page 12, of the report we are told:

> In addition there is the opportunity to use futures and options to hedge the underwriting of new security issues. Investment bankers interviewed as a part of this study, in fact, did report some use of stock index futures and options for hedging against major changes in market prices when underwriting new security issues.

In the only actual analysis of data that the Katzenbach study appears to have made, it finds "no relationship between any measure of volatility on a day-to-day basis and the intensity of program trading." It also concurs with the other reports that program trades represented approximately 7% of NYSE volume on October 19.

Finally, the credibility of the Katzenbach study must come under question when, after reporting on the general negative nature of futures, the study recommends that the NYSE institute a similar market.

THE BRADY COMMISSION REPORT

The Brady report, commissioned by the President, emphasizes a number of key facts and makes some unique recommendations:

- The crash involved concentrated selling by a relatively small number of institutional traders. This selling took place in both the futures and stock markets.

- Portfolio insurance contributed substantial selling pressure to the stock market. However, its sales represented less than 15% of total equity sales in stocks and futures combined.

- The NYSE DOT system became virtually unusable during the crash, greatly inhibiting the effective operation of the NYSE.

- The interruption of index arbitrage, as a result of DOT inadequacies as well as NYSE policy decisions, was responsible for the large discount that developed between stock index futures and the prices of the related stocks. The Brady Commission clearly feels that the "decoupling" of the markets significantly exacerbated the crisis.

- CME local traders performed well during the crash, buying somewhat more aggressively than normal, and tending to concentrate their buying during periods when prices were falling. The Brady Report concludes that the futures market makers contributed some stabilizing influence to the market, although the net effect was not large.

- NYSE specialists did not uniformly meet their obligation to make liquid markets during the crash. The report states that many specialists were net sellers of stock during critical periods. In addition, the report questions individual pricing decisions made by many specialists.

- The crash brought the U.S. financial system close to disaster. The Brady Report argues that the banking system almost failed to meet the liquidity demands placed on the financial system by the crash, and praised the actions taken by the Federal Reserve Board to preserve liquidity.

THE REPORT OF THE
U.S. GENERAL ACCOUNTING OFFICE

The G.A.O. report, issued on January 26, 1988, as well as Mr. Bowsher's testimony before the House Subcommittee on Telecommunications and Finance provided the following observations and recommendations:

- The G.A.O. agrees with the Brady Report that the nation's stock, options and futures markets have become closely "linked" and that such links necessitate more coordinated domestic and international regulation.

- Mr. Bowsher criticized Federal regulators, including the SEC and CFTC, for not having developed a contingency plan for handling a stock crisis and urged the two agencies as well as the Federal Reserve Board and the nation's securities and futures exchanges to develop a crisis plan within 30-60 days to help restore confidence in the markets.

- The massive volume of trading activity strained automated systems to meet the needs of traders. The unprecedented volumes, coupled with large order imbalances and rapid price movements, strained the market-making capability of the NYSE and the OTC market.

- Repeated breakdowns of computer systems on the NYSE aggravated the selling panic on October 19 and were far more extensive than previously known. These resulted in hundreds of uncompleted trades, and delayed execution for thousands of trades.

In addition to the foregoing, there remains the forthcoming SEC report which will be released just prior to our testimony and too late to be included in this analysis.

Of all the reports to date, we believe that the Brady Report, because of its independence and expertise, will carry the most weight with this Committee. We concur with this view. Accordingly, we wish to focus primarily on its recommendations and to offer our response.

The Brady Report adopts a central theme: that the stock market, the stock options market and stock index futures market are the components of one overall market system. While the CME does not concur with every recommendation of the Brady Report, we do embrace its philosophical theme. We agree that there exists an inter-relationship between all the markets. We also agree that this philosophy demands better coordination between the markets.

However, the report recognizes that the separate markets operate in different fashions and for different purposes. For this reason, the report does not recommend a single regulator for all the markets. Instead, the Brady Commission acknowledges the importance of maintaining the SEC and CFTC as separate federal regulatory authorities. The Report argues that coordination must be available in a crisis, and that only the Federal Reserve Board has the necessary system-wide perspective.

The CME does not concur with the Brady Report that the use of the Federal Reserve Board as a coordinator is appropriate or necessary. Toward the goal of inter-market coordination, the Brady report proposes action in four areas:

1. COORDINATION OF "CIRCUIT BREAKERS" WHICH SHOULD BE "RATIONALIZED" ACROSS MARKETS.

As noted in the report, the futures and options markets already have in place the type of circuit breaker mechanisms sought by the Brady Commission. Indeed, the Chicago Mercantile Exchange voluntarily imposed daily price limits during the emergency and recently has proposed to the CFTC a system of refined limits on a permanent basis. (A full explanation of proposed CME rule changes follows).

Additionally, the CFTC has the power to shut down futures markets if an exchange fails to act in an emergency. Currently, however, the securities markets have no similar mechanism and the SEC has no similar power. The financial system also lacks a method of coordinating emergency actions

among markets.

The Brady Report argues that circuit breakers work best when their operation is known in advance to all market participants and when the process operates in a coordinated fashion among the markets.

Again we agree. We also believe, however, that the private sector provides the best source for the sophisticated knowledge necessary to create and implement coordinated circuit breakers in a manner that will not impede normal market functions. We believe the Brady Commission would support such a view. We trust that Congressional impetus to achieve coordination between all the exchanges will be sufficient to achieve the desired result. We, at the CME, stand ready to work toward this goal.

2. COORDINATION OF IMPROVED INFORMATION SHARING. THE BRADY REPORT SPECIFICALLY PRAISES THE INFORMATION SYSTEMS AVAILABLE IN THE FUTURES INDUSTRY AND RECOMMENDS THAT SECURITIES EXCHANGES DEVELOP SIMILAR CAPABILITIES.

The CME could hardly object to this view. We agree that improvements in information systems will enhance the efficiency of our markets and overall investor confidence. We also believe that our experience in this area gives us special insight and license to propose an alternative solution.

The Chicago Mercantile Exchange proposes that rather than create another layer of federal authority, existing intermarket structures be utilized. Specifically, we propose that the existing Inter-Market Surveillance Group, "ISG," an entity created and operated under the auspices of the SEC, serve as a model for a new Inter-Market Coordination Committee ("IMCC") to include all of the futures markets, the CFTC, the National Futures Association, and the Federal Reserve Board.

We also propose that the SEC and the CFTC be granted enhanced powers to specify the timing and format of information flows among the members of the IMC in the event that the private members are unable to promptly agree or in the event that the SEC and CFTC are dissatisfied with the agreement reached.

The ISG is an organization comprised of U.S. securities and options exchanges and was organized for the purpose of conducting joint surveillance.

A major portion of the ISG's activities focus on the collection, processing, and re-distribution of various types of exchange data necessary to conduct intermarket surveillance. ISG members are required to send detailed trade information to the Securities Industry Automation Corp. (SIAC)[2] which handles all data collection and processing. SIAC then produces surveillance reports for each ISG member for each stock or stock option traded at that exchange. More recently, the ISG members who have large trader reporting requirements have been required to provide daily large trader data to SIAC for the production of co-mingled large trader reports.

We propose to expand these activities to include sharing of cash flow data across the commodities and securities exchanges. We feel that this centralized information sharing will greatly improve the financial integrity of all exchanges, and will facilitate detection of intermarket violations such as "front-running."

3. A "UNIFIED" CLEARING SYSTEM.

The October crash generated two types of financial strain on the U.S. market system: solvency pressure and liquidity pressure.

The market system dealt with solvency pressures reasonably well. Despite the unprecedented loss of about $1 trillion in total market asset value, only a few firms failed or merged, and no customers lost money because of defaults. Nonetheless, the crash clearly demonstrated a need for better sharing of position data among exchanges, as a means to better control of default risk. Exchange risk management teams will always be in a better position to assess the risk posed by individual traders and firms if the exchange has access to the trader's total position.

More significantly, the crash also demonstrated the danger that liquidity pressure can create for fundamentally solvent firms. As the Brady commission points out, the difficulty of arranging smooth funds transfers, the asymmetric cash flows produced by many common trading strategies, the reluctance of lenders to extend normal credit in a crisis, and the voracious demand for cash at futures and options exchanges, all combined to produce a serious liquidity problem.

Neither solvency nor liquidity problems can be completely solved by any feasible clearing system. Traders who lose more than their capital will fail, and a large enough

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[2] SIAC is jointly owned and controlled by the New York Stock Exchange and the American Stock Exchange.

price move will always produce some defaults. Furthermore, since futures must demand daily cash settlement, while winning stock positions do not generate cash, many conservative arbitrage and hedge positions will require bank financing on a regular basis.

Even if clearing house reforms cannot solve these problems, however, better coordination of cash flows and position data could significantly reduce liquidity pressures. Lenders who had access to comprehensive information on a clearing firm's position and pay/collect status across exchanges would be much less likely to deny credit to a solvent firm. In addition, exchanges could reduce cash demands on the system by paying out on an intraday basis, in addition to making intraday collects. Exchanges might also coordinate intraday calls to ensure that firms could use pays from our exchange to meet collects by another exchange. Finally, coordinated collection of intermarket information will enhance the security of lenders who finance the carrying costs of the positions.

All of these reforms can be achieved without the creation of a single centralized clearinghouse. The CME believes that with our proposed changes the IMC could serve as a vehicle for coordinated clearing.

4. COORDINATION OF "CONSISTENT" MARGINS ACROSS STOCK AND STOCK-RELATED PRODUCTS.

The Brady Report unequivocally concluded that as regards "the intramarket financial performance control aspect of margin," futures margins differ "fundamentally" from that of margins on stock investments and that "the financial performance control aspect of futures margins has operated in a sound and effective manner on an intramarket basis."

We agree with this assessment, and we believe that the financial performance of the futures industry during the crash illustrated the value of maintaining the authority for financial and margin decisions in the same place as the expertise -- at the exchanges. We also recognize, however, that the crash demonstrated the unpredictability of the financial environment, and emphasized the need for constant re-evaluation of risk management procedures.

As part of this re-evaluation, we propose to introduce a better margining system for options, which will provide a much more precise measure of position risk. We also propose to move to a system of risk-based capital requirements, which will provide a substantially higher level of investor protection than the system currently mandated by Federal law. These improvements represent just one aspect of our primary concern: maintaining the financial integrity of our exchange.

Brady clearly agrees that the futures markets are in the best position to make the delicate adjustments necessary to make margins effective, and that their self-interest in the financial security of their markets is sufficient incentive to assure that they do the job correctly.

However, the Brady Commission seems to revive the misconception that "speculation" is distinguishable from and less valuable than "investment." Few, if any, economic studies would agree with this view. Moreover, from this unfounded belief Brady draws the conclusion that it is appropriate to control speculative behavior in order to inhibit overvaluation in stocks. This, the Report argues, would reduce the potential for a precipitate price decline fueled by the involuntary selling that stems, for example, from margin calls.

The foregoing might lead the casual reader of the Brady Report to conclude that the Commission actually found that the market was overvalued by reason of "excess speculation" made possible by "low" futures margins. That same reader also may have concluded that the market drop was intensified by the involuntary selling of overextended futures market "speculators" pressed by margin calls. These are not the findings of the Brady Report. Indeed, there is nothing in the Brady Report to support either of those conclusions and the facts are directly contrary to them.

Nevertheless, while recognizing that margins in futures need not be the same as those in stocks, the Commission suggests that they should be "consistent" with those of professionals in the stock market. We wish to carefully examine this view and comment upon it.

First, the Commission fails to support its assertion that futures margins are significantly lower than the margins imposed on the professional stock market participants whose activities are the focus of the Brady Report. The multitude of exemptions from Federal initial margin requirements that are exploited by those traders allow them to assume large stock positions with minimal outlay and without an obligation to cover unrealized losses on a daily basis.

But even more importantly, the suggestion that futures margin levels were instrumental in driving stock prices above fundamental values is illogical. The cost of speculating that the market will go down is equal to the cost of speculating that it will rise. There is no bias in either direction. Indeed, in futures, there is a short for every long.

Moreover, the total open futures positions represented less than 1% of the value of the shares listed on the New York Stock Exchange as of October 15, 1987. If every dollar of S&P futures positions represented unwarranted speculative demand, the total impact on the demand in the equity market would still be utterly insignificant.

Indeed, if the futures markets were a home for "excessive" speculative demand, one would expect to have seen the open interest in futures contracts growing at a rapid pace during 1987 when the equity market made its sharpest upturn. That was simply not the case. Furthermore, since the United States has the only well developed futures markets for stock indices, one would expect that any impact of "low futures margins" could be seen by comparing performance of U.S. equity markets to foreign equity markets unaffected by "low futures margins." No such impact can be found. U.S. stock prices rose less than comparable markets that existed without stock index futures contracts, and the U.S. price earnings ratio increase was middling in comparison with the 18 largest industrialized countries.

Moreover, the view that speculation is linked to market instability has been studied at length by our nation's finest economists. See, A Review and Evaluation of Federal Margin Regulations, A Study by the staff of the Board of Governors of the Federal Reserve Bank, December, 1984, or for a comprehensive bibliography see S. Figlewski, Margins and Market Integrity: Margin Setting for Stock Index Futures and Options Working Paper Series #csfm-83, 1984. Direct tests of the effect of margin requirements on price volatility in the stock market have found little apparent relationship.

More fundamentally, "margin" in stock and "margin" in futures are two substantially different things -- only the word is the same. Stock margins limit the extension of credit to purchase an asset. A futures contract is not an asset -- it has no value when purchased. It is therefore not logically possible to discuss futures margin in the context of credit extension. Instead, futures margins are good faith deposits for contract performance. Yet, even in this capacity, futures margins play a substantially different role than securities margins. In contrast to securities markets, futures markets maintain a virtual "no debt" financial system. All futures market positions are marked-to-market at least on a daily basis, i.e., any price changes in futures positions representing losses must be paid for in cash at least on a daily basis.

For example, pursuant to normal procedures in volatile market periods, during recent weeks, our exchange has called for margin payments two and sometimes three times during a single trading session. This financial system, substantially safer than other systems that allow losses to accumulate for many days, avoids the need for high initial margins to maintain financial integrity.

Thus, the differences between the role, function and level of futures and stock margins exist as a natural and necessary result of the very different functions these two markets perform. They are not the result of a regulatory gap or loophole. Perhaps the clearest evidence of this comes from securities options markets whose purpose and function is, in many respects, similar to that of futures markets and whose margins are regulated by the Federal Reserve Board and the Securities and Exchange Commission. Securities options margins are, if anything, lower than comparable futures markets margins.

It is also instructive to take note that foreign futures markets, competing directly with our American futures markets for world business, understand and apply the aforestated different standard between securities and futures margin. For instance, the following are samples of foreign futures margin as a percentage of contract value on October 16, 1987:

LIFFE:	Long Gilt Eurodollar FTSE 100	2.0 % .05 % 2.7 %
MATIF:	Notional Bond	4.0 %
TSE:	Yen Bond	3.0 % of nominal value with a minimum of 6 million Yen
HONG KONG:	Heng Seng	7.9 %
SIMEX:	Nikkei	5.7 %
SYDNEY:	All Ordinaries	3.7 %
NEW ZEALAND:	Barclay's Index	4.8 %

Finally, the Brady Commission's hypothesis that large futures speculators were forced to liquidate during the crash and thus caused a downward price spiral is contrary to fact. Speculative accounts were significant buyers on October 19. Rather than exacerbating the decline, speculators helped to cushion the market against the selling of pension funds and other institutional users of the S&P futures contract. Furthermore, whereas a forced liquidation would result in

panic selling by speculators and a reduction in the total number of open positions, the clear fact is that they bought and, as a result, the open interest on our market increased significantly.

THE ROLE OF FUTURES

Before concluding, I would like to make a point about the fundamental value of futures markets to the U.S. economy. We have heard some talk -- from the Katzenbach report, for example -- contrasting the role of stock markets in capital formation and investment with the role of futures markets in facilitating risk transfer and speculation. Let's look at that claim.

First, most conservative investment strategies would classify as "speculation" under commodities law. If you were to buy a stock portfolio and hold it, the CFTC would consider you to be a speculator, because your position increases your risk. In fact, the CFTC has faced pressure recently to change the hedging/speculation distinction, since many conservative investment firms take offense that we classify their normal business activity as "speculative" when conducted in our market. Speculation, the process of accepting risk in return for financial gain, forms the heart of any capital market.

Second, let us examine the role of both stock and futures markets in capital formation. Many laymen are unaware that a "new issue," -- i.e., a company that has just gone public and issued equity to raise capital -- would usually not trade on the NYSE for years. The large, established companies that trade on the big board may occasionally issue new shares, but these shares account for far less than one percent of annual trading on the NYSE. Furthermore, the actual process that firms use to issue new equity by-passes the stock market entirely.

If the NYSE does not directly support capital formation, then what role does it play? The answer, of course, is that it provides liquidity to shareholders, allowing them to transfer stock ownership. Although most of these trades have no direct connection to "capital formation," the existence of a good secondary market for stock encourages investors to purchase equity in the first place, and thus helps companies raise capital.

The futures market plays an analogous role. By providing institutional investors with a vehicle for transferring the risk of a stock portfolio, and by providing liquidity for "baskets" of stock, the futures market increases the attractiveness of equities as an investment, and thus indirectly encourages capital formation. The low costs created by efficient market rules and carefully controlled margin requirements provide much of the benefit of these markets.

The rapid and growing worldwide acceptance of stock index futures provides convincing evidence of their economic value. Policy makers must understand that handicapping these markets with unnecessary regulation would do damage to the economy as a whole.

I would also like to take issue briefly with the allegation that futures markets have aided and abetted institutional traders in forcing the "little guy" out of the stock markets. The direct participation of small investors as a percentage of total volume has shrunk as the size of institutions such as pension and mutual funds has grown. This trend has been evident for decades and is unrelated to program trading. It began long before the advent of futures trading of stock indices.

We need to understand that these institutions represent the little guy. Most investors who actively manage their own stock portfolios have far more wealth and income than the average American. In contrast, pension and mutual funds represent investors with far less average income. At least 28 million, or 60%, of pension beneficiaries earn less than $20,000 per year, and would have little chance of competing directly in the stock market against sophisticated, wealthy investors.

Professional investment managers represent over 33 million mutual fund shareholders and over 60 million pension plan participants and their beneficiaries. These professionals manage over $2 trillion in assets on behalf of tens of millions of American households. Institutions offer these small investors access to professional management, and an equal opportunity to profit from their investments. Accusing these institutions of discriminating against the "little guy" is absurd.

Government policy should strive to make markets fair and efficient for all investors, but policy should not attempt to dictate the form that investment management takes.

Finally, I would like to comment on improving market access to enhance liquidity and achieve better market balance:

The October crash demonstrated the danger of allowing the stock and futures markets to become disconnected. While trading halts offer one solution to this problem, we can also prevent stock and futures prices from diverging by ensuring that major traders have good access to both markets. Improved access would allow buyers to go to the lowest price, and might prevent the reoccurrence of large futures discounts without the need for index arbitrage.

Regulation currently inhibits many institutions from trading in the futures market. We propose reform of the following regulations:

- The "short-short" rule, which provides disincentives to mutual funds for participation in futures markets
- Investment Company Act restrictions that prohibit mutual funds from placing futures margins at FCM's
- Restrictions contained in state insurance company regulations that limit these firms' use of the futures markets.

Direct access to the futures markets by a wide variety of institutions could balance buying and selling pressure across markets, and could significantly reduce pressure on the NYSE during periods of price volatility.

CONCLUSION

Attached hereto as Exhibit B is a package of reforms proposed by the CME that our judgement and experience suggests will improve the functioning of the U.S. market system as a whole. This package includes:

- Creation of an Inter-Market Coordination Committee ("IMCC") by expansion of the ISG. IMC would include all of the futures exchanges, securities exchanges, the CFTC, the SEC, the NFA, the NASD, and the Federal Reserve Board to facilitate coordination of clearing, surveillance and risk management across all securities and commodities exchanges.
- Adoption of coordinated "circuit breakers" on equity products.
- Adoption of a number of specific reforms to improve financial integrity and liquidity:

- Changes to intraday margin calls.
- Better option margining systems.
- Risk based capital requirements.

We hope the CME's proposal will be accepted by the Congress. In our opinion, it offers effective means to implement the necessary market improvements. While it embraces the general philosophy of the Brady Report, the CME's alternative plan has two compelling virtues.

First, we recognize and exploit the existing expertise of the CFTC and SEC and grant the Federal Reserve a voice in all important issues without creating a new agency division, new staffing requirements and a new and unnecessary layer of regulation.

Second, we put the burdens, costs and consequences exactly where they belong on the private sector -- on the exchanges. The markets and their users will directly pay for enhanced information systems. They will create, maintain, and bear the total costs of the information exchange systems. They will bear the responsibility for inadequate margins.

The only burden on the budget arises out of the regularization of SEC/CFTC cooperation and the SEC's administration of improvements to stock and option exchange audit trails. This surely is the proper allocation of costs and resources.

* * *

EXHIBIT A

PRELIMINARY REPORT OF THE
COMMITTEE OF INQUIRY
APPOINTED BY THE
CHICAGO MERCANTILE EXCHANGE
TO EXAMINE THE EVENTS
SURROUNDING OCTOBER 19, 1987

HAS BEEN SUBMITTED

AS PART OF THE COMPLETE TESTIMONY.

COPIES OF EXHIBIT A CAN BE
OBTAINED THROUGH THE CME RESEARCH DEPARTMENT.

EXHIBIT B

POLICY RESPONSES TO THE OCTOBER CRASH

A PROPOSAL BY THE CHICAGO MERCANTILE EXCHANGE

February 3, 1988

The Brady Commission report provided a careful and well documented analysis of the October crash. The Chicago Mercantile Exchange feels that the report identified serious problems which must be resolved, and we have focused our proposals to address these problems. We have used the Brady Commission proposals and recommendations as a strong framework for constructive reform.

The Brady report makes a central observation about markets in stock, stock options, index options and index futures -- that they are closely linked, and must remain closely linked to function effectively. The report argues that the markets failed to meet this requirement during the crash, and that this violation of the "one market" concept led to serious problems that almost precipitated a major financial crisis. The Commission identified four areas requiring close attention:

- Clearing and Settlement Procedures
- Information Flows
- Margin Requirements/Financial Safeguards
- "Circuit Breakers"

We agree with this critique. We feel that each of these issues should be examined for its effect on intermarket performance, and that those areas that caused problems should be changed. We offer the following set of proposals to address these issues.

Clearing and Settlement Procedures/ Information Flows

Inter-Market Coordination Committee: The CME proposes the creation of an Intermarket Coordination Committee ("IMCC") to coordinate and oversee issues involving clearing, settlement, and financial integrity. This Committee would be modeled after the Intermarket Surveillance Group (ISG) set up by the Securities and Exchange Commission about ten years ago to deal with intermarket surveillance issues. The IMCC should include the CFTC, the SEC, the NFA, the NASD, and the Federal Reserve Board, and participation should be mandatory for all futures and securities exchanges.

The IMCC should mandate sharing of two central types of information in connection to clearing activities:

- Pay and collect data used in daily settlement
- Data on clearing firm positions across markets. We propose that the "DSRO" for each firm -- the self regulatory organization charged with auditing the firm -- would make this information available to members of the IMCC on an as-needed basis. Futures and securities exchanges could use the IMCC vehicle to share information on a reciprocal basis.

Effective sharing of this information might have reduced pressure on the financial system during the crash, and would have provided each exchange with a means of fully assessing the risks faced by its member firms.

The IMCC should also provide the Federal Reserve with a clear picture of liquidity pressures on the banking system, and will provide a centralized forum for managing those pressures.

The improvements in financial information flows recommended by the Brady Commission can be obtained through creation of the IMCC. One information area remains uncovered, however-- compliance and surveillance issues. We propose that these issues be addressed by an arm of the intermarket committee, which would share surveillance data on a routine basis, and which would conduct joint investigations as needed. Again, we feel that the CFTC and SEC should be members of this surveillance group, and that exchange participation should be mandatory. These issues probably fall outside the expertise of the Federal Reserve Board.

The CME also proposes a number of specific measures designed to enhance the clearing and settlement process:

1) Bank Settlement: The CME encountered some specific problems in obtaining prompt fund transfers during the crash. These problems involved liquidity and operational issues, rather than solvency problems, but they must be addressed nonetheless. We propose the following specific changes:

    - Strengthening of our agreements with settlement banks to clarify each bank's responsibilities
    - Cooperation with the Federal Reserve Board to eliminate the time lag between bank commitment for exchange liabilities, and actual transfer of funds via the Fed wire.

2) **Intraday Margin Calls:** During the week of the crash, the CME and other exchanges made unusually heavy intraday margin calls to protect the financial integrity of the exchange system. Because the CME and many other exchanges follow a policy of collecting margin due from firms without paying out margin due to firms on an intraday basis, these margin calls could potentially create liquidity problems for member firms.

We propose to begin paying out gains as well as collecting payment for losses. We hope that other exchanges will adopt similar policies, and we would like to see these transfers coordinated through the IMCC.

Margin Requirements/Financial Safeguards

The Brady report called for "consistent" margin requirements for professional traders in both index and stock markets. The CME believes that the strict one-day settlement required for futures and options positions already makes margins on these products consistent with professional stock margins, where settlement does not occur for five days, and where numerous loopholes exist. We also believe, however, that the crash illuminated some areas where futures industry financial safeguards must be improved.

1) **Options Margins:** The CME currently bases its option margins on a simple system known as "delta margining." The Exchange proposes to move to a new system that will provide better discrimination among options positions, and which will accurately identify positions that carry greater than normal risk and should pay higher margins.

2) **Risk-Based Capital:** The CFTC currently specifies minimum FCM capital requirements based on the amount of customer funds held by the firm. We have petitioned the CFTC to add a risk-based capital requirement. This requirement would selectively impact firms whose customer or house accounts represent larger than average risk for a clearing house, and would represent a substantial improvement over the current system.

3) **Security Deposits:** The CME has not historically relied on security deposits as a major financial safeguard, depending instead on conservative margin and capital requirements. Security deposits do offer one substantial advantage, however, they give the Exchange a source of immediate funds that would not compromise the margin on existing positions. Although the CME would not have needed to use such funds during the October crash, we feel that such a reserve would

represent a useful addition to our risk management tools.

Circuit Breakers

1) **Price Limits:** The CME believes that price limits serve a useful function under extreme market conditions.

We do not believe that price limits will stop large price changes. Limits stop trading, but they do not affect changes in investor expectations and beliefs. However, by providing investors with time to respond to the new environment, limits may reduce panic and improve market liquidity. Toward this end, we are proposing an innovative package of price limits.

- Daily Price Limit:

We propose S&P futures price limits scaled to the price of the contract. We propose the following set of price limits:

S&P Futures Index Value	Price Limit
0-275	15 pts
275.05 - 325	20 pts
325+	25 pts

- Opening Price Limit:

We feel that limits can play a special role when the market opens, since this is a time when investors have the least information about where prices will be. Consequently, we have also proposed an opening price limit of 5 index points that would apply for the first 10 minutes of scheduled trading each day. This limit will ensure that investors are not caught by surprise during a major opening price move, but will not result in a day-long trading halt.

2) **Pre-Approval of Hedge Exemptions:** The futures industry uses price limits as a circuit breaker to ensure that individual traders or accounts do not grow too large for the market to accommodate. These "hedge exemptions" are granted to traders who have a legitimate need for large positions, and are willing to submit to close monitoring.

The CME has previously allowed hedgers to trade into a position that violates their current position limit, as long as the trader immediately applies for an extended hedge approval. The Exchange now intends to change this procedure, and to require all traders to obtain formal approval before exceeding position limits.

3) Improved Market Access: The October crash demonstrated the danger of allowing the stock and futures markets to become disconnected. While trading halts offer one solution to this problem, we can also prevent stock and futures prices from diverging by ensuring that major traders have good access to both markets. Improved access would allow buyers to go to the lowest price, and might prevent the reoccurrence of large futures discounts without the need for index arbitrage.

   Regulations currently inhibit many institutions from trading in the futures market. We propose reform of the following regulations:

   - The "short-short" rule, which provides disincentives to mutual funds for participation in futures markets
   - Investment Company Act restrictions that prohibit mutual funds from placing futures margins at FCM's
   - Restrictions contained in state insurance company regulations that limit these firms' use of the futures markets.

   Direct access to the futures markets by a wide variety of institutions could balance buying and selling pressure across markets, and could significantly reduce pressure on the NYSE during periods of price volatility.

The Chicago Mercantile Exchange believes this comprehensive set of proposals fully addresses the problems identified by the Brady Commission. We believe implementation of these proposals will significantly improve the functioning of the U.S. financial markets.

The **Chairman**. Thank you for a good, strong, clear statement.

CORRECTIVE MEASURES NEEDED NOW

Mr. Melamed, Henry Kaufman, president of Salomon Bros.—I'm sure you know of the great respect we all hold for him—recently wrote an article that appeared in today's Washington Post that we should not view the October crash as an isolated phenomenon never to recur. Rather, he said, we should see it as a warning and should take corrective measures with a sense of urgency.

This echoes Mr. Brady who has said that, "We are looking down the barrel and the gun is still loaded."

Do you share with these other experts the sense of urgency that corrective measures need to be adopted without undue delay?

Mr. **Melamed**. It is difficult to argue with such qualified expertise, Senator Proxmire, but I'd like to give you a bit of a different viewpoint.

It must be understood that at the time of October 19, we were in a critically difficult situation by virtue of the fact that stock prices and their earning ratios had reached levels of unprecedented heights in comparison to anything we've witnessed in the United States—except for perhaps the third quarter of 1929. Such is not the case presently.

The market is at a much more realistic level of pricing. Earning ratios and levels of stock prices are much more realistic and in tune with the times.

I therefore do not believe that one can compare October 19 with today and I must say that although I do agree that we ought to correct any of the errors and make our markets better, I do not share the sense of urgency indicated by those statements.

Rather, I suggest that we carefully examine what we have to do and do it, as the Chicago Mercantile Exchange has already offered to do.

The **Chairman**. Now Mr. Brady recommends that the Federal Reserve be given oversight and coordinating authority over the stock, stock options, and stock index futures markets.

Mr. Ruder believes the SEC should be that ultimate authority.

You apparently disagree with both. In a crisis, can we realistically expect the regulators and the self-regulating organizations to cooperate?

The stories in the press about disagreements between yourself and Mr. Phelan during and after the October crisis are not reassuring. When things flare up again, the Congress wants to hold somebody accountable and not just have people blame each other. We want to know who will act and we want to know that that person knows that if they don't act that they're going to be blamed and they're going to be held accountable.

If one agency has to be ultimately accountable, which one would you choose to assume that overarching power, the Fed or the SEC?

Mr. **Melamed**. First, I'd like to say that many of the press reports—in my case with respect to Mr. Phelan—are not correct. Mr. Phelan and I, I think, have a very high regard for each other, and respect each other, and indeed have had many conversations together both before and after the October 19 crash.

With respect to your question in particular——

The **Chairman**. May I just interrupt to confirm that you did disagree, however, or did you not?

Mr. **Melamed**. Pardon me?

The **Chairman**. I don't mean to say that you had hard feelings against each other. I know you have great mutual respect on both sides. But didn't you disagree?

Mr. **Melamed**. We have many points on which we disagree. We have many points on which we do agree.

The **Chairman**. That's my point.

Mr. **Melamed**. With respect to the question that you asked, I would respectfully submit that the record of events do not at all indicate that the Securities and Exchange Commission did any better job in regulation than did the CFTC. In fact, I may point out to you, sir, that the CFTC, in our opinion, did a better job than the SEC.

I must tell you, sir, that the complaints that I've seen—and I'm talking about hundreds of complaints from customers who have used the markets—did not come to the futures exchanges. Rather, they came to securities exchanges which are governed not by the CFTC but by the SEC.

The **Chairman**. But Mr. Melamed, you told us just now, you made it very clear, that you agreed wholeheartedly that there is one market—one market. I presume that we need some kind of coordinated regulation over that market. How can we have one market and have two regulators that from time to time would disagree without having one of those regulators have the opportunity to have the last word?

Mr. **Melamed**. Well, I understand that, but I also understand that the private sector, can achieve that kind of coordination. It has in the past.

An example of this coordination occurred recently between the New York Stock Exchange and the Chicago Mercantile Exchange regarding the so-called "triple witching" problem. We had a problem, sir. We got together and we solved it. I believe it can be repeated in this case. I believe the private sector has that kind of expertise and that kind of motivation. I believe that the SEC and CFTC can find a common understanding on those areas that are needed, particularly if any emergencies occur. I think the agencies are both very competent to do that.

The **Chairman**. I think the agencies are very competent, but of course we need action and we need action here in a hurry. It's like having two Secretaries of Defense or two Presidents. It seems to me that we need one executive to take the responsibility and make the decision when we have a crisis of the kind we had on Black Monday.

Mr. **Melamed**. I do not believe that in a crisis situation any one person has all the answers. People rely on other expertise as we did on October 19 and the days that followed. For example, throughout that period, we were in constant contact with Senator Riegle, with Mr. Phelan, with the SEC, with the CFTC, and others.

I think that coordination can be achieved in harmony between agencies, particularly if the private sector takes steps in advance along the lines we've recommended.

The CHAIRMAN. My time is up. Senator D'Amato.

Senator D'AMATO. Thank you, Mr. CHAIRMAN.

SEVERAL FACTORS CONTRIBUTED TO MARKET BREAK

Leo, the Brady Commission report identified several trading practices most frequently cited by market professionals as contributing factors to the depth and the rapidity of the market decline. They included portfolio insurance, stock index arbitrage, and program trading.

Would you care to comment on that and what, if anything, can be done as it relates to these activities in dealing with them? It would seem that many people acknowledge that these were substantially contributing factors, the program trading, et criteria. What, if anything, should be done as it relates to these future activities? How can they be done? Some have indicated that they're important. How would you maintain them and yet attempt to create a system where you limit the volatility if you do have a situation such as October 19?

Mr. MELAMED. Well, first, it must be recognized that the so-called portfolio insurance and program trading are market strategies. I think that strategies should not be legislated for or against. Those are decisions that the market users make a determination about and to the extent they did not work—which appears to have been the case—those strategies won't be used again. I think the marketplace, to that extent, will take care of its own.

No strategy can exist that doesn't work. After all, the investors in this country are not fools and will not permit a strategy to be used unless it earns them money, unless it protects them when it needs to; and, when it doesn't, it will be discarded or adjusted. That process is happening right now. The marketplace will adjust those strategies. No external stimulus, like Federal regulation, is needed.

Senator D'AMATO. Well, let me then put this forth. The New York Stock Exchange has proposed to stop program trading activities through the OTC system once the Dow rises or drops 75 points during the day. I'm not asking you to comment on that specific 75 point level.

Would you support that kind of implementation or that kind of authority where there are certain levels, where there are indications of certain volumes and certain rises that are rather unusual?

Mr. MELAMED. Senator D'Amato, ordinarily those decisions ought to be coordinated across market lines. However, the DOT system is a proprietary system of the New York Stock Exchange, used for order routine and delivery. As a proprietary system, the NYSE is entitled to make the decision with respect to the use of that system.

Senator D'AMATO. Well, of course I'm not talking about the specific system as such, although I make reference to it because we're talking about what I would hope would be the kind of thing that you've spoken about in terms of better coordination between all of the marketplaces. So I'm saying as a general rule do you see the necessity for having—I hate to borrow the new term of art—the circuit breaker kind of situation where you would suspend program trading for a period of time so that the market analysts, et cetera would get an opportunity to look at it rather than just have this kicking in throughout the country and throughout the world?

Mr. **Melamed**. I see your point. My preference would be to have that kind of decision coordinated with other exchanges——

Senator D'**Amato**. I'm not discounting coordination with others because I think there should be, but what about that—would that provide a safety valve or would it exacerbate the problem?

Mr. **Melamed**. Well, it's very difficult again for me to object because DOT is a proprietary system of the New York Stock Exchange. To the extent it disconnects our two markets, shutdown would not be beneficial. To the extent it slows down some order flow, it might be beneficial. So it has both elements in it.

I might mention something else.

Senator D'**Amato**. Are you studying that?

Mr. **Melamed**. We are studying that and would like to continue discussing that with the New York Stock Exchange. However, our choice for a circuit breaker is a price limit. We will not trade below that price limit. Halting the DOT system is not an actual circuit breaker. It doesn't stop the price from continuing downward or upward as the case may be.

Senator D'**Amato**. Let me ask one final question. It has been indicated over a period of time by many—and I've raised the question myself as it relates to the adequacy of the margin requirements, and often you have advertisements that play that with $5,000 you can control—I put on the TV the other night right here in D.C. and I've seen this advertisement—$5,000 and we'll show you how you can control $100,000 worth of stock. That's being advertised regularly.

Now what about commenting on that? Is that adequate? Is that sufficient? I want to compliment you for reviewing some of the requirements and I heard you indicate 15 percent margins. Would you care to discuss that with the committee, because it is an area of contention and one that many people have raised?

Mr. **Melamed**. I would be very pleased to respond to this question. I would like a moment to step back and try to explain this issue because it is one that is very important. To understand futures margin, as you know, Senator D'Amato, one must understand that futures operate an entirely different financial system than do the securities market. We have a no-debt system. In other words, the value change of any position in our market is paid for at least by the next morning. This means that irrespective of what your initial margin may have been, before the market opens the following morning you will be called for any additional money—the exact cash equipment—necessary to pay for the full change in value of your position.

For example, if your starting position requires a 10-percent margin deposit, and the market changes an additional 10 percent, you must pay 20 percent in actual cash by the following morning. You may not trade on credit. It is a no-debt system and that's quite unlike the securities market.

As a matter of fact, I understand that this came up in a conversation yesterday before this committee: That on October 19, the truth is that our market called for and received as much as 40 percent margin requirement which was paid by every long contract holder in our market.

Therefore, it is very difficult to compare simple initial margin in futures and that in securities. You will agree that there are significant differences between a securities system which requires no payment for 5 business days and the commodities system which requires immediate payment and next day adjustment. If a proper comparison is made of the leverage in the no-debt futures system versus the delayed pay accumulated loss securities system, the futures system would come out safer, more prudent, and less leveraged.

Therefore, our acceptance of a 15-percent margin puts us at a higher level when properly assessed than the professional margins at the New York Stock Exchange.

Senator D'AMATO. Well, my time is up, Mr. Chairman, and I want to thank Mr. Melamed for his candor and certainly as it relates to this issue of margins I think that that is something that at least this Senator thinks is important that we get a better understanding, and the public as well, because there is obviously a difference as it relates to the role that margins play in equities as opposed to the futures markets. Maybe Mr. Melamed later on would care to comment on that, but I now have intruded on Senator Riegle's time, but I think that's important.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Well, I hope to pass that intrusion down the line so it will be somebody else's time. [Laughter.]

We have roughly 5-minute time periods here and I want to try to engage two very complex subjects within that period of time and I don't want to feel like we're hurrying today. If we had to have this hearing run for days, I think it would be time well spent because I think the public needs to understand what's going on and we need to make competent moves, however they're made—public, private, whatever.

The sense that I have developed in trying to fathom the changes in the market system and so forth lead me to this supposition or conclusion and I want to put it on the table and ask you to react to it.

Institutional investors that run major pension portfolios of stock and market professionals have more and more come to dominate the trading activity in common stocks in this country. The small investor has become a smaller and smaller factor in terms of everyday investing and market trading and so forth and these individuals, professionals of one kind or another, that control very large blocks of stock seem to me to be dominating the volume of traffic. The estimates are 80, 85, 90 percent of the daily traffic are the people who manage enormous blocks of stock.

Because of that, common stocks in large volume become a kind of commodity. Whether they should be or not is another issue, but they become a place where institutional investors can put the dollar of their holdings in stocks or they can take them out and put them in currencies, take them out of that and put them in foreign investments. They have a whole range of options and there's a lot of trading that goes on in and out of these institutional portfolios. In fact, a lot of stories are being written now that every 90 days these portfolio managers get measured and each one tries to outdo the other and so you've had an enormous transformation it seems to me in terms of who generates the traffic, how those players are different from somebody who was an individual 20 years ago who may have held 100 or 200 shares of AT&T stock, and it's a different ballgame.

It seems to me that that's, in effect, what's really given rise to the futures market in stock indexes and that is, that the volume of traffic by these big players in and out of these positions is a new fact of life in such a way that a derivative market or a secondary market has come into being, in a sense, to handle a lot of that traffic—you used a phrase earlier—to hedge their stock risks. That would be one way to say it, or even to go through the process of moving in and out of different kinds of balanced positions in terms of asset management.

As a result, this market has developed—the derivative stock index market, which you folks have been in the lead, along with others—the Board of Trade and others—in acting in that area.

It seems to me that if we don't understand something and at some point take the time to try to see how the system has changed, how we've evolved, and how these massive blocks are in a sense traded off one against the other, and how that gets leveled out in now what is a derivative market, it's pretty hard to understand what's really going on.

Would you generally agree with that proposition or would you explain it fundamentally differently than that?

TECHNOLOGY HAS CHANGED THE WORLD

Mr. **Melamed**. Senator Riegle, that was a very eloquent statement of exactly how the world is working today.

I must tell you that I recently had the pleasure of reading an article in *Forbes* by Walter Wriston, the former chairman of Citicorp, in which he stated, that what the world doesn't understand is how technology has changed our world; that we've gone through a technological revolution and we all now live in an information standard, rather than a gold standard or a Bretton Woods standard. This means there are screens all over the world viewed by traders, investors, money managers, et cetera. Information is consistently and constantly fed on those screens and is reacted to instantly.

Trading is global. We've moved on this information standard and you and I and this Congress, fortunately or unfortunately, cannot do anything about it. No matter how we legislate or try to, we will in fact not change that information standard. The world is continuing to work that way.

Senator **Riegle**. All right. Let me take that the next step. If we've got in a sense two markets—we've got the underlying market in stocks, just talking now about stocks and stock futures and indexes—and we've got the derivative market over here, we've got the question of all the cross-connects between these two markets that are related but different. Almost everybody agrees they are different and how we manage the cross-connect, how we set up an understanding which holds this system which is really one system with different parts together is really the challenge that we face.

Now on that Tuesday when we were on the telephone and I was talking with others and it appeared that we were on the very lip edge of the whole financial structure of the market——

Mr. **Melamed**. The most serious moment of my life.

Senator **Riegle**. It was about to shut down. And as we were talking, I think it's fair to say that you felt that in fact that process was going on right at that time. It later didn't completely shut down, but it appeared as if it was going to.

Now Henry Kaufman's article today points out that in that market break worldwide $1.7 trillion worth of value evaporated. It was there 1 day. Bang, it was gone the next. And the market mechanisms handled a certain amount of that, but finally it got to the point where the market mechanisms were incapable of handling it and were on the verge of collapse.

I want to take just that issue and I want to sort of pull it up front and center and I'd like to have your thought as to why it was at that point on that Tuesday the market system appeared to be incapable of functioning any longer and was in the process of shutting itself down. What wasn't working? What happened at that time that put us in that kind of peril? I want to then try to go from that in terms of how we don't get back to that point. I realize market values have come down and so market conditions are different, but why did we reach the break point that day? What part of the system was failing to work that put the whole thing in jeopardy?

Mr. **Melamed**. It is the most difficult question to try to answer because the short answer, of course, is that the world was panicked and that there were no buyers, and that's the short answer.

However, the longer answer is the following: Some of the systems had shut down, automatically or by virtue of their incapacity. The securities market at that point in time was in effect not operating. Many of the major stocks were not open and there were no buyers. We were on the telephone, just minutes or seconds before I spoke with you, with John Phelan, and he advised us that that was the critical moment that many of the major stocks could not find buyers and could not open.

The Chicago Board Options Exchange had already closed. It was not operating. The American Stock Exchange's index was not trading.

The Chicago Mercantile Exchange and the Chicago Board of Trade, with a smaller contract, were the only markets still open. If the word had gotten out that in fact the New York Stock Exchange was going to officially close, which was under consideration, we judged—we weren't told but it turned out to be the fact—if a NYSE closing were announced, it would have accentuated that panic and we were desperately afraid that our market would become the only market subject to panic selling. With our market the largest, the most prudent thing we could do for that moment in time was to close down.

That may not specifically answer your question, sir, but it is the closest I can get to it.

Senator **Riegle**. Well, we've got to try to elaborate. My time is up.

The **Chairman**. Senator Bond.

PRICE LIMITS

Senator **Bond**. Thank you, Mr. Chairman.

Do you believe, Mr. Melamed, that many of the problems in the panic can really be adequately resolved by imposing price limits? It seems to me from your testimony that many of the things we talked about here could have been avoided if we had limits that were in place not only on the Merc but on other markets, and ultimately I would hope in London, Tokyo, and other places.

Do you think that is one of the significant cure-alls?

Mr. **Melamed**. Senator Bond, Mr. Sandner would like to respond.

Mr. **Sandner**. I think it responds in part to Senator Riegle's question with a little more elaboration.

Gridlock occurred on that Monday, whether it was credit, or whether it was an overwhelming amount of selling with no buying coming in, or whether the market was in a panic stage. If we assume a perfect world and return to that Monday and take the proposals we have now on the table such as circuit breakers and coordinate them not only with the New York Stock Exchange but throughout the world. It might have helped. If there's value—and I believe there is value—to halting a market at a particular point in time so that people can gather their thoughts and people can start to correct the imbalances and people do not have the demands on credit in such a brief period of time, I think we could have alleviated much of the problem.

The market might have sought the level that it ultimately sought, but it would have done it over a more protracted period of time. I think therein lies the real problem, that the period of time in which it occurred was so brief and so contracted that the system in the United States of America couldn't respond.

I believe the proposals that we have on the table—not just circuit breakers but there are several other proposals which we can get into, and I don't want to use up all of your time, Senator Bond, in answering this question——

Senator **Bond**. You might as well. It's certainly more informative than listening to me talk, so go ahead.

Mr. **Sandner**. If we take in all of those proposals, they address many of the problems that seem to be looming so large in the world today with the financial system as they appeared on October 19, 1987.

DOUBTS ABOUT CIRCUIT BREAKERS AND PRICE LIMITS

Senator **Bond**. I would be interested in your comments, perhaps, on the point that the distinguished Chairman of the Federal Reserve raised when he expressed some doubts about circuit breakers or price limits on the markets, saying that this might drive either business overseas—and obviously we would have to negotiate similar limits or encourage other countries to impose limits—and that there's been some suggestion that these might have a harmful effect on people's willingness to participate in the market.

Have you heard those arguments and would you care to respond to them?

Mr. **Sandner**. Yes, I've heard the arguments and they are sound arguments. But Chairman Greenspan's conclusion is most significant. I think he said that circuit breakers and limits, although perhaps destabilizing and all the other things you said, Senator Bond, are perhaps the best of the available solutions; although they may not be good solutions, they are the best of all the solutions on the table if we can't come up with a better solution than circuit breakers and, therefore, we should go with that solution.

Senator BOND. Mr. Melamed, you said that some of the strategies that have been devised, such as dynamic hedging and portfolio insurance, have been proven to be ineffective. I was very heartened to see that portfolio insurance had dropped by about two-thirds, but the fact that there's still a third around gives me some concern.

Do you believe that having limits would be sufficient to send a signal to rocket scientists of tomorrow who try to achieve the unattainable of protecting themselves against any market downturn, that there will not be the liquidity, they will not have the option to sell futures or to sell stocks with the limits? Will the limits have a beneficial effect on those strategies as well?

Mr. MELAMED. Senator Bond, ultimately, I have great faith in the rocket scientists who understand reality. And reality is, that if a strategy doesn't work too well, you adjust it, you make it better, and you keep trying to make it better. After all, we don't stop with any first failure in anything we do. We try to make it better. And if the system or invention doesn't work, we will correct it, or abandon it.

I think the financial managers that use portfolio insurance will find a way to adjust that strategy so they can apply it in realistic terms. It obviously didn't work as if there had been perfect liquidity. You're absolutely right. Therefore, I expect they will adjust their assumptions, expectations, and use.

Senator BOND. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Bond.

Senator Dixon.

Senator DIXON. Thank you, Mr. Chairman.

As you know, what we're trying to do here is to respond appropriately in a manner that will address this problem, and Senator Brady had made some suggestions the other day and, Mr. Chairman, I think some of the questions you directed to Mr. Melamed were along the lines of some of those discussions that we had with Senator Brady about an overseeing agency for all of these problems.

I'd like to make this first observation. I have previously been intimately involved in a crisis in our State regarding the banking industry, which is also a matter that this committee has jurisdiction over, when the Continental had its problems in late 1985. And I want to point out that there are actually three different Federal agencies that were involved in that—the Comptroller of the Currency because it was a national bank, the Federal Reserve System because liquidity was involved, and the Federal Deposit Insurance Corporation because of the insurance questions.

I think this committee remembers when Paul Volcker was before us and I expressed my profound appreciation to the fact that he discussed those issues with me on Christmas Day when those problems were before us in Illinois with respect to the Continental. And those three agencies, working in cooperation with the Continental and others, addressed that problem, developed a solution or a response to that problem that I would suggest has been a pretty good solution.

On the basis of that, I want to extrapolate from that and say that all of the testimony that I have heard so far indicates to me, first of all, that the Fed doesn't want this responsibility; second, that the SEC and the CFTC and their chairmen have stated to us in this committee on prior occasions this week that they are prepared to deal cooperatively to address all of these problems.

And with respect to the major four priorities, if I may indulge, Mr. Chairman, the committee by reminding us all of this again—that they are prepared to deal with this. First, as Senator Brady said, clearing and credit mechanisms need to be unified across market segments; second, the question of margin requirements; third, intermarket issue involving circuit breakers; and fourth, the need for better information systems to monitor the intermarket trading strategies that are significant to the one-market system.

COOPERATION BETWEEN CFTC AND SEC

Now I'm going to ask you, Mr. Melamed, and you, Mr. Brodsky, and you, Mr. Sandner, representing the Chicago Mercantile Exchange, which is an important agency in the futures marketplace, whether you are fully prepared in every respect to cooperate fully with the discussions that go on between the CFTC and the SEC and their chairmen to find the response mechanisms that are necessary to deal with this problem within that type of a framework.

Mr. **Melamed**. Unquestionably, Senator Dixon. We are prepared, we are willing, we have done so, and will continue to do so. As a matter of fact, the written testimony indicates that the package of recommendations we submitted yesterday to the CFTC includes precise and exact responses to the four areas of the Brady Commission that you so correctly outlined here this morning.

We have responded, we think, in an extremely responsible fashion. We have coordinated this response with the Chicago Board of Trade. They have a similar response and will testify to that effect later this morning. And we will stand ready to cooperate with any exchange in New York, particularly the New York Stock Exchange.

Senator **Dixon**. Now let me ask you one final question. There's been some discussion here over the last several days and I believe I speak for every one of my colleagues on both sides of the aisle on this committee when I say that we are all impressed with the fact that this is a global marketplace. This is a marketplace where what happens in New York, in Chicago is also happening in Tokyo, is happening in London, is happening in Hong Kong, is happening in Zurich, is happening all over the world.

Now just to be a devil's advocate, I ask you this question. If this committee or the Congress initiated the kind of Federal legislative responses to the concerns out there that diminished the free market aspects of your marketplace, would that in fact adversely affect the economy in New York, Chicago and all over the United

States to the detriment of this country, and benefit the marketplace in London, Tokyo and other places, Mr. Melamed?

Mr. **MELAMED**. Without question, Senator Dixon, it would. It would endanger our market system in a terrible fashion because in the telecommunication world that we live in today these markets can be created and recreated anywhere. As a matter of fact, as we debated this very issue and as we questioned the role of futures markets, the Japanese Government proudly announced, just several days ago, that they have proceeded toward the formation of a futures market in Tokyo. And as you and I know, that they are not bashful in taking industries away from us and have done so in other sectors of our economy, much to the detriment of the American economy and society.

We hope we don't do anything that would destroy or impede the growth of futures in this country and allow these markets to go to a foreign shore, particularly to the Japanese who we consider extremely competent competitors.

Senator **DIXON**. My time is up.

The **CHAIRMAN**. Senator Sanford.

Senator **SANFORD**. Mr. Melamed, I thank you for your testimony and indeed for that last answer to Senator Dixon. I think that's a very crucial consideration.

But I've had the growing uneasy feeling that we are probably asking the wrong question and I take a sentence out of your study that says, "We found no evidence that the futures market led the stock market decline."

OVERVALUATION OF STOCKS

I conclude that the reason we had a decline and such a sudden decline is something you referred to in the beginning but that we haven't been talking about in this committee, namely the unprecedented heights or the overvaluation of stock, the highest in history.

Now what are the forces that took it up? Because if it hadn't gone up it wouldn't come down, and you're quite right in saying that it's not likely to crash again like that because now it's more nearly properly valued according to economic valuations. What are the artificial forces? What's the fundamental problem?

For example, the Brady report had charts and information that seemed to think that lax regulation of hostile takeovers was way ahead of other markets in going up. The whole concept of speculation in terms of making judgments on the basis of what the market might do instead of what the economic worth of the stock is. And maybe, as some have suggested, the availability of futures—what has that had to do with the rise? Maybe the question we ought to be asking is, what do we do not to take care of a crash, but what do we do to prevent unrealistic overvaluation which it will surely every time lead to a crash? People were saying last summer that it would. In fact, I remember discussing with the managers of endowment funds that I had responsibility for for 16 years that I thought that we were getting in a very dangerous situation and they assured me that this new concept that I surely didn't understand of insurance would take care of it. [Laughter.]

So what are these forces that takes everybody out there to where they were just asking for a crash? It was bound to come.

Mr. **Melamed**. Senator Sanford, some of us did not go public with our opinion in the year or two before the crash but felt very strongly that the market was overvalued and said so to anyone that came to one's office to discuss these matters. And we concurred with what Alan Greenspan said when he said that stock prices finally reached levels which stretched beyond belief expectations of rising real earnings and falling discount factors, as you so correctly indicated.

It was produced, I believe, by the fact that $150 billion a year in takeover money went to the market on an annual basis and that $23 billion was in foreign money that kept coming to the market. Obviously, those are enormous money flows.

And what happened was that that kind of money ignored reality. It ignored not only price-earning ratios; it also ignored some basic fundamental issues that emanate from a very large deficit and that needs to be attended to and that creates all kinds of other problems such as a low dollar and a trade deficit.

These enormous money flows ignored basic economics and it was almost like a wave that couldn't be stopped and kept going higher and higher. But it certainly wasn't the futures market because foreign markets that don't have any futures market went upward and onward—in the case of Japan, much higher; and in the case of other countries, much higher than the United States. And, therefore, it was a global phenomenon of purchasing stocks and securities that went out of bounds.

Senator **Sanford**. Well, I quite agree that the futures market didn't lead the way to that, either, and that would be the other side of that sentence that's in your report, that there's pretty good evidence that the futures market didn't lead the market increase.

But now I would appreciate—and we won't have time here—I would appreciate your elaboration for the benefit of us on two points that you made and for any others that relate to this unprecedented, unrealistic, overvaluation.

One, I heard you say that the takeover money had a big part in it and I have been of that judgment and been of the opinion that we ought to regulate more severely hostile takeovers in any event. Second, that we ought to do something about this unprecedented national debt.

My time is up but maybe we can pursue those two questions in writing at some other time.

Mr. **Melamed**. I'd be pleased to.

The **Chairman**. Senator Shelby.

Senator **Shelby**. Thank you, Mr. Chairman.

You talked about the global market and obviously it is a global financial market. It's all interlaced with information.

Is it true that most financial markets today are basically driven by information only?

Mr. **Melamed**. It is absolutely true.

Senator **Shelby**. And information knows no bounds as far as countries?

Mr. **Melamed**. No barriers, no bounds.

Senator **Shelby**. Could you explain briefly just what is program trading and how index arbitrage works in there?

Mr. **Melamed**. Very briefly, program trading is a stock market strategy whereby a financial manager decides that rather than to purchase or sell any one or two individual stocks, he buys or sells an entire basket of stocks or sells an entire basket of stocks. That, in effect, is program trading.

Index arbitrage works by virtue of the fact that if the stock index futures market is at discount or premium to the the actual cash price in the stock market, index arbitragers bring both markets into line. For example, when futures are at a discount, or are at a price below the "fair value" in relation to the stock market, futures are purchased and stocks are sold.

Senator **Shelby**. One begets the other, does it not?

Mr. **Melamed**. I think they work in conjunction with each other, yes.

Senator **Shelby**. When the market was going up and up and up and up, I know there were a lot of people that were cautious about it. You mentioned you were. You thought that stocks were overpriced, way out of balance, no reason, no rationality there. Was there much heard on the street other than a few whimperings here and there about how high the market was going or was it a state of euphoria that people said, "We'd better get on the wagon," no real caution?

Mr. **Melamed**. I tell you, Senator, it was a state of euphoria that boggled the imagination. I used to sit in the dentist's office and the dentist would tell me how much he made since last time I visited him which was only 2 weeks ago. I certainly think that there was a state of euphoria that spanned all nationalities and all boundaries.

Senator **Shelby**. At that time did you hear any cries from the Congress of the United States or others for the Congress to come in and put some limit on the outward spiraling growth?

Mr. **Melamed**. No, I did not hear any of that.

Senator **Shelby**. You didn't hear anything there, did you?

Mr. **Melamed**. No one minds if it's going up—it seems.

Senator **Shelby**. But in a market driven by information or a free market, things are going to go up and go down and sometimes a little precipitously?

Mr. **Melamed**. I agree and I think this was a major correction. I believe Senator Proxmire is on record for saying the same thing, that a major correction in the market was necessary and this was it.

FOREIGN COMPETITION

Senator **Shelby**. Let's talk about something that Senator Dixon got into a few minutes ago. If you weren't doing it here, if you couldn't do the things like index arbitrage and other things, portfolio insurance, in America, it's obvious that it would go somewhere else. You mentioned Japan. But it wouldn't necessarily just be in Japan. It could be in Germany. It could be in Hong Kong, anywhere they have a free market. Is that right?

Mr. **Melamed**. Absolutely. In fact, London and Paris have created futures markets and are attempting to wrest markets. They are very competent people. Japan is only one place. Singapore already has a market.

Clearly, every capital center, every financial center in the world is envious and wants the formula of the creation of futures markets, to wrest from us the business that we bring to it.

By the way, Senator, there's somewhere between $3 and $4 billion in money that comes to the United States on a nightly basis, a third of which comes from foreign shores, and has a very positive effect on our balance of payment as a result of futures markets.

Senator SHELBY. In this marketplace that we operate in, the global marketplace, do you know of any boundaries that money has?

Mr. MELAMED. None that I know of.

Senator SHELBY. None whatsoever, does it?

Mr. MELAMED. None whatsoever.

Senator SHELBY. And it will seek its source whether it's in Tokyo, Zurich or Frankfurt, London, et cetera.

Mr. MELAMED. Wherever the information sends them to do it, they'll do it.

Senator SHELBY. How can you really control or supervise a global financial market if we're just one of the players in it in the United States?

Mr. MELAMED. Well, I don't think you can control it. What you have to do is make our market accommodate that business, invite that business and make it strong enough that the business stays right here and not impede it from coming here.

Senator SHELBY. My time has expired.

The CHAIRMAN. Thank you, Senator Shelby.

Senator Sasser.

Senator SASSER. Mr. Melamed, I'll ask you and your colleagues, the General Accounting Office has been critical of the Securities and Exchange Commission and the Commodities Futures Trading Commission for not having a contingency plan in effect for handling a stock crisis and urged these agencies to develop one to help restore confidence in the market.

Now the Federal Reserve Board did have a contingency plan. We heard that one of Dr. Greenspan's first directives to the Fed was to prepare a contingency plan in what he perceived I'm sure as the highly unlikely event that there should be a collapse of the market.

CONTINGENCY PLANS

Do you think it would have made any difference if these two agencies—the SEC or the Commodities Futures Trading Commission—had had in effect a contingency plan? It seems to me that if the existing regulators were properly prepared and knew what they were doing and were acting responsibly and acting quickly, perhaps we wouldn't need a new regulatory authority.

Mr. MELAMED. Well, I will say this, Senator. I, for one, was very proud of the way the Federal Reserve reacted and did have a contingency plan and were very accommodating and, indeed, prevented what might have been a runaway situation on Monday and Tuesday of that week. Clearly, it was important to have such a plan in place and carry it out. So, in that respect, I agree that it could not have hurt to have a plan. As a matter of fact, coordination of that kind is always necessary and preplanning can never hurt. I clearly agree that such a plan should be in place.

Senator **Sasser**. Well, we even had the statement made on Black Monday by the Chairman of the SEC to the effect that maybe the SEC ought to think about closing the markets. Well, the truth is, the SEC doesn't have the authority to close the exchanges, as I read the law. Now I think the Commodities Futures Trading Commission does have authority.

Mr. **Melamed**. You're right on both counts.

Senator **Sasser**. But clearly that statement, maybe it was misinterpreted, maybe the Chairman was misquoted, maybe it was taken out of context, but the SEC did not have the authority to close the exchanges and from my reading of the press and discussions with others this had a very depressing effect on the market and accelerated what some viewed as almost panic selling at that point.

Mr. **Melamed**. Clearly, sudden action that is unexpected or rumors of action are even worse, and that occurs when there is no plan. When suddenly the market anticipates something it didn't expect, that's the worst thing that can happen to it and can increase the panic situation, especially in dangerous situations such as that which we found ourselves in on Monday and Tuesday. It exacerbates market fears and that ought not to happen. We should have a preplan and that's why even in the case of circuit breakers, we suggest they be known way in advance, whatever they are. The marketplace ought to know they're out there. They will serve as a safety net for everyone to know they're out there.

Senator **Sasser**. Right. Now you I think have stated that you generally agree with the Brady Commission report.

Mr. **Melamed**. We embrace its central theme that it's one market and it needs coordination.

Senator **Sasser**. Yes. Senator Riegle I think has quite rightly pointed out—I don't know if he has here today or not—but has pointed out that perhaps we need some type of international regulation in view of the fact that if we seek to regulate the market here, the the market could simply move offshore. And I think that the performance of the London bond market on Black Monday and around that period indicated how quickly the market moving offshore can happen.

What is your reaction to this proposal that we give some consideration to an international regulatory group or body? Have you had an opportunity to consider that or study it or could you give us a studied opinion on it?

Mr. **Melamed**. I have not had an opportunity to study international regulatory authority since I'm not with the Government in terms of that kind of study. However, Senator Riegle——

Senator **Sasser**. What's your horseback reaction to that?

Mr. **Melamed**. Senator Riegle and you are quite correct. It ought to be our thinking to coordinate international interactions to these things. There should be a way to talk our foreign counterparts to coordinate these things because business will flow to that center that's open and to that center that allows it, as is what happened in the case of the bond market.

So, when you talk about circuit breakers, perhaps we should consider discussing them with other countries as well.

Senator SASSER. One final question, Mr. Melamed. There were problems raised in the New York Stock Exchange by the failure of the specialist system, many have alleged, to perform properly. One of the principal problems with the specialist system was that it did not have sufficient capital.

What do you think about the allegation that the specialist system on the New York Stock Exchange did not have sufficient capital, and what effect did the performance or lack of performance of the specialists in New York have on the Chicago markets on Black Monday?

Mr. MELAMED. Well, with respect to whether the specialist system had sufficient capital, I would defer to those experts that have stated that. I believe these are serious things and that the NYSE should very carefully examine their capital structure to determine whether they indeed must raise their capital.

We, in our turn, have done this very same thing. We're making changes where needed and as they relate to the Brady recommendations.

But as far as the effect, which is the second part of your question, of certain specialists who were unable to make a market in stock, that had repercussions across all market lines and obviously prevented an equity cash market which in turn meant that our market could not operate efficiently.

Senator SASSER. My time has expired. Thank you.

The CHAIRMAN. Senator Graham.

Senator GRAHAM. Thank you, Mr. Chairman.

I'd like to pursue the line of questioning started by Senator Sanford and also the questions that several have raised about our global position.

FUTURES INDEX STOCK MARKET

Starting with those questions of Senator Sanford, I'd like some information on the futures index stock market.

When did it commence? When did the Chicago Exchange start selling futures on the stock market?

Mr. MELAMED. Actually, the idea for stock index futures, with all due respect, was not my idea. That idea has been around for 30, 40, maybe 50 years, maybe even longer than that.

It came into existence, however, in 1982 or thereabouts, and it wasn't the Chicago Mercantile Exchange that was first. The Kansas City Value Line Contract, which is a similar market, was first, and the New York Futures Exchange, which in fact is a subsidiary wholly owned of the New York Stock Exchange, was second in line. As a matter of fact, John Phelan, I believe, was chairman of that exchange during its formative years when they attempted to make a market not only in stock index markets, but they attempted in Treasury bills and currencies, markets that Chicago had devised in the decade before that. So, in effect, the Chicago Mercantile Exchange stock index product, the S&P 500, came third in line, and subsequent to that, the Board of Trade's own market in about the same 1982 period.

Senator **Graham**. What were the economic motivations that led to these three or four entities at about the same time all come forward with this idea?

Mr. **Melamed**. The clear understanding that the world financial managers were in command of some very large pools of money that needed markets that could quickly and efficiently respond to their need as some of the older traditional markets could not do. As a matter of fact, we are told by financial managers that the cost efficiency of futures markets far outweighs and outbalances anything in the securities market and they prefer futures markets for providing insurance and risk transfer mechanisms.

I must tell you that our markets have really three or four major functions: risk transfer; price discovery; cost-efficiencies in transactions; and capital formation. And those were the four things that served to tell us we had to produce markets of that kind or they would be produced on foreign shores.

Senator **Graham**. You have now had approximately 5 years of active experience with this. What proportion of the stock index futures are now being traded through the Chicago market as opposed to those—speaking of the U.S. domestic market, what percentage are being traded through Chicago?

Mr. **Melamed**. We believe it's between 60 and 70 percent of the stock index futures are traded in Chicago at our exchange.

Senator **Graham**. And of those that are stock index futures, what percentage is that of the total activity of the Chicago market?

Mr. **Melamed**. Well, it was around 24 percent. I think since the stock market crash, it's somewhat lower than that.

Senator **Graham**. With 5 years of experience, do you believe that the case can be sustained that those four reasons that were given for the establishment of the stock index future have been validated by pragmatic experience?

Mr. **Melamed**. In our opinion, absolutely so. The measure that we produce of additional liquidity—I grant you, not enough all the time—but the additional liquidity the futures markets produce is a very positive factor in all the markets and is one that we should continue attempting to do better with.

Senator **Graham**. It's been suggested—and I'm going to use a term of Senator Dixon's, the devil's advocate, so that I can disassociate myself with any responsibility for the question—that the stock index futures have resulted in a hyper level of activity in the overall securities market have caused a focus of evaluation of economic consequences to be shortened in terms of whether you value a 10-year investment as opposed to a 90-day speculative opportunity.

What's your response to those criticisms of the effect of adding this new element to our securities economy?

Mr. **Melamed**. The futures markets have been accused of many things and, of course, speculation is one of the things they are accused of. I have already answered in terms of our margin structure and it must be understood we have a very secure system in terms of mark-to-market which is, in fact, a more secure system than the securities market. So I think that many of these accusations are simply not justified.

In the case of the stock index futures market, I must tell you that portfolio managers, money managers, represent millions of investors of small funds that could not otherwise participate in the market except by virtue of the financial manager doing that performance for them. And to the extent that financial managers and institutions use our market, we must provide them that market. And contrary to any beliefs that others would have, our markets have had a very positive effect on the small investor in this country.

Senator **Graham**. My time has expired. Thank you.

The **Chairman**. Senator Karnes.

Senator **Karnes**. Thank you, Mr. Chairman.

Mr. Chairman, I do have a statement for the record that I'd like to have inserted.

The **Chairman**. Without objection, it will be printed in full.

Senator **Karnes**. Thank you.

Mr. Melamed and your colleagues, I welcome you to this committee and I was very impressed with your statement. It was very well done.

DOT SYSTEM

I'd like to start off with a couple of questions on the DOT system if I could. What is your perception of the decoupling effect that occurred when the DOT system was no longer available to the market participants during that period of time in October?

Mr. **Melamed**. Well, because such a thing was not prepared for and unknown to happen, it was very destabilizing. Obviously, when you disconnect markets in any fashion, it is not a positive factor on the marketplace. A disconnection is a negative thing.

However, as it relates to present conversation in terms of what the New York Stock Exchange presently is considering doing, as I've indicated, the DOT system is a proprietary system of the New York Stock Exchange and they are at liberty and may deal with that as they see fit. I would only hope that they would coordinate their action with the futures industry.

Senator **Karnes**. What impact did that decoupling effect have exasperating the market movement during that period of time, in your opinion?

Mr. **Melamed**. Well, I think what the Brady report correctly indicated is what happened: That our market did not have a means of adjusting itself in correct alignment with the stock market as a result of the decoupling, because it was unprepared and because the index arbitragers that would normally do the balancing for the two markets could not function. Therefore, it had an effect of destabling our market even further.

Senator **Karnes**. What impact would the decision, I guess, that the New York Stock Exchange has made or is discussing about stopping program trading at 75 point moves one way or another on the operation of the Chicago markets, and is that again a procedure that may create additional decoupling situations in the future if we don't do things in a coordinated fashion?

Mr. **Melamed**. I think if we don't do things in a coordinated fashion, it will hurt the overall one-market concept of the Brady philosophy. That's absolutely correct. I believe the New York Stock Exchange should coordinate with the futures exchanges on this issue and I sincerely offer our cooperation toward that result.

Senator **Karnes**. What would be an appropriate response for your markets in Chicago if, indeed, that is what is put in place in New York?

Mr. **Melamed**. Well, we're going to have to study that. But if it's done long in advance so the market participants know what to do in the event it hits their particular program prohibition price—75 points or 50 points or whatever it is—there are market participants that will be able to do something in substitution to keep our markets in line. But it has to be well understood in advance, and discussed by the members of the New York Stock Exchange community and worked out in coordination with the futures market.

Senator **Karnes**. And I assume that there's ongoing conversations as we speak or since the activities in October to develop a level of coordination that would accomplish this, or tell me, are we having some turf situations?

Mr. **Melamed**. Well, I would like to say that we are open to conversation. We've had conversation. We believe the role of Congress and this committee would be well placed in prodding the participants, such as the New York Stock Exchange and the Chicago Mercantile Exchange and the Chicago Board of Trade, to move forward. We'd like to coordinate and the finest role that this committee can make is to sort of push us in that general direction.

Senator **Karnes**. Mr. Chairman, those are the only questions that I have and I would thank you again for coming and just encourage all of my colleagues to take a word of caution that we need to do some prodding as best we can and maybe not legislating in a whole host of areas which I think is an opinion that's shared by many people. Thank you again for coming.

The **Chairman**. Thank you very much, Senator Karnes.

I hope we can make our questions as brief as possible. I know we could go on all day, tomorrow and so forth with this excellent witness. We have the president of the National Association of Securities Dealers to hear from this morning. We have the president of the American Stock Exchange. We have the chairman of the Chicago Board of Trade. And, therefore, I hope we can abbreviate our questioning as much as possible.

Senator Riegle.

Senator **Riegle**. Thank you, Mr. Chairman. I realize we're under real time pressure here.

PRICE/EARNINGS RATIOS

I want to correct a factual assertion that's been made several times this morning. I've checked it out with the staff economist. It is said and sort of taken as fact that the price-earnings ratios prior to the crash were at an extraordinarily high level and beyond anything in recent memory or recent history and so forth, and that is just not true. They were very high, but we've had other periods in recent years when the P/E ratios have been as high as they were then.

Where the real discrepancy was, was between price-earnings ratios for stocks and in bond yields. There was an enormous disparity in bond yields and what happened was that interest rates went up and suddenly the gap between bond yields and price-earnings ratios became so accentuated that that was what hollowed out the price support for the market.

I don't want to debate that here now, but I think if we just look at this in one dimension and say that it was just sky-high price-earnings ratios, that that tends to create an impression that's false.

But I want to talk about how it was that price-earnings ratios were driven as high as they were in relationship to bond yields and all the background economic circumstances because some have asserted—and this relates to you and the Board of Trade that's coming—that the derivative market in stock indexes has provided an additional element of leverage and, as a result, either because the margin between the underlying stock market and the derivative market was somehow out of line or because there was sort of a multiplication of leverage, that this helped drive the market up to higher levels than it otherwise would have gone.

When the elevator cable snapped and the elevator car began to come down from the 20th floor, people wanted to get out at the 19th floor or the 18th floor and they couldn't get out because the car had dropped too fast. There wasn't the liquidity. There weren't the buyers and so everybody had to take the ride on down except maybe those who were well positioned to get out somehow, but most everybody had to take the ride down until the car hit bottom and took these huge losses, many people, in the meantime.

So I think what we have to understand is we really have to understand the degree to which this cross-market connection is adjusted properly between the fact that you've got two different kinds of markets—the underlying stock market and a derivative market—and what the amount of margin should be and how we view that margin.

You made the point earlier that you are basically a cash market, a mark to market market, and so every morning people have to settle up and if they have to put more money on the table, that's sort of the nature of the business that you're in and that's different in certain ways from the stock market.

Now you've made a decision to adjust margins voluntarily.

Mr. MELAMED. That's correct.

Senator RIEGLE. To me, I read from that, as you look at this thing and you try to figure out how you equilibrate between these two connected but different markets, that the level we had before maybe wasn't the right level, and that you feel more comfortable with a different level with some additional things, circuit breakers and so forth, but nevertheless, on just the issue of margin, you've decided, as I understand it, that you want to make an adjustment in that area.

I think this committee needs to understand as well as we can this margin issue between the two markets, how the margins are different, what constitutes a sufficient margin structure, so that people can come in and invest. I take it that most of the investors in the futures market are institutional investors. They are big shooters. They are not small shooters, for the most part, but they are big trades of one kind or another, portfolio managers or others. But help us understand it. We put this question yesterday to the CFTC representative who was here, and frankly, I thought we got an embarrassing insufficient answer. And I will put the same question to the stock exchange people. But explain to us how the margin structure in your business is different from, say, the New York Stock Exchange and how we think through the question of where these margin levels ought to be pegged, so we don't get any kind of question of overleveraging or things of that kind.

Mr. **Melamed**. I would be happy to, Senator Riegle.

First, let me respond to your comment with respect to the P/E ratios. Obviously, my answer was in line with what exactly you said, that it was a comparison not one-dimensional, but when you compare yields and all other things, we're talking about historically high levels. As that kind of comparison goes, you are absolutely right to explain it that way.

Now with respect to the margin situation. Our market operates in a no debt environment, in a no debt system. Irrespective of what margin deposit you make in your initial entrance to the market, you will be charged for every dollar change in value that occurs against your position on a daily basis. If your margin deposit originally was 10 percent and the market moves 10 percent that day against you, you will be asked by the following day to pay another 10 percent.

Indeed, our margin is an ongoing, self-correcting mechanism that continually draws from the market and from the participant the amount of margin to make our market secure and safe, no debt. That's quite contrary to how the securities market operates.

Senator **Riegle**. Yes, but why wouldn't somebody who doesn't understand the subtleties of this say, well, if the percentage is one level in one market, it ought to be the same level in the derivative market? Explain why, in your view, they're not exactly comparable and one would be at one level and one would be at a different level?

Mr. **Melamed**. Senator, compare, if you will, futures markets with an initial margin of 15 percent and a no-debt system which is marked-to-market daily with the securities markets with a 25-percent margin. If the market goes against the holder of securities 25 percent that day, he doesn't put up any more money that day, he doesn't put up any money the next day, he doesn't put up any money for the next 4 days, as a matter of fact.

In our market, the holder puts up the 15 percent the first day, and if the market goes against him 25 percent that day, he will add an additional 25 percent, bringing his total margin to 40 percent.

Senator **Riegle**. Well, is that the key difference, then, the time period, to come up with the additional amount of money, because you do it overnight and in the other market, it's a 4- or 5-day period? Is that the only—or is that the principal difference, or are there other differences?

Mr. **Melamed**. That is certainly a critical difference of leverage. It is a critical difference of credit. The other thing that must be remembered is that at no time do you purchase anything in futures markets. What you are doing is ensuring a price. It is security deposit for the next movement of price. That is all you are doing. You are never going to get a dividend from your stocks. You are never going to, in fact, own anything, and you are not borrowing against the rest of the purchase price. None of that occurs in the futures market. Our market is for price protection and you deposit a security bond toward the price protection. It is insurance you are buying, and you really can't compare insurance with the downpayment.

I ask you the simple question, and I think you and I both know the answer, that if you purchase a house and you pay a third down and then an insurance man comes over and says I want you to insure against fire, you aren't going to expect that insurance man to ask you another 25 percent or a third down. You will certainly not buy that kind of insurance, and you maybe won't even buy the house, if you couldn't get insurance for it at a much cheaper price.

We provide that insurance, and that is critical for the whole system to work and create the liquidity and safety that, in fact, we have produced. This system works, Senator Riegle, and it works very, very well, and our margins are at a sufficiently high level even today to protect the system.

I think that Senator Brady and others have pointed out that in terms of financial integrity, which is the primary reason for our margin system, we were superb. There was no question about it. Our market worked extremely well and the financial integrity of our market was without a flaw.

Mr. SANDNER. If I may, Senator, I would like to state a sobering fact to illustrate the differences in "margin" during that particular scenario of October 15, 16, and 19. Suppose that on Thursday night, October 15, an investor bought a basket of stocks on the New York Stock Exchange which are equivalent to our S&P 500 and that another investor bought an S&P 500 stock index futures contract. On our market, the investor would have had to deposit an immediate $10,000 for that one contract while on the New York Stock Exchange, the investor would owe, as margin, a certain percentage, maybe 20 percent of the value of the $149,000 value of the 500 basket, approximately on Thursday night an amount not due for 5 days. On Friday, October 16, our market moved approximately $8,000 a contract. The investor would have had to put up another $8,000 before the market opened Monday morning, for a total "margin" of approximately $18,000. At the New York Stock Exchange, the investor bought the basket on Thursday night, still has put nothing up, with no demand except down the line 3 or 4 more days.

On Monday, when the market broke, it broke $40,000 a contract in our market. By Tuesday morning, our investor has to put up another $40,000 for a total of $58,000. By Tuesday morning, that futures contract was valued at approximately $100,000, 58 percent of the value of the contract had to be put up within 2½ days. Compare this with the New York Stock Exchange, where the investor bought a similar basket of stocks. On Tuesday night, he has still not put up one penny, and he doesn't have to until approximately Thursday or Friday of that week—and that is why there were so many questions of whether or not the New York Stock Exchange was going to make settlement on Thursday—we had already made settlement. We had done our pays, and we had done our collects, and we were ready to do business the next day with no uncertainty.

Our system is eminently more secure than that system.

Senator **Riegle**. Mr. Chairman, my time is up. I think we are on an important topic, if I may say so.

The **Chairman**. Senator Dixon.

Senator **Dixon**. Thank you, Mr. Chairman.

Now, Mr. Melamed and Mr. Brodsky and Mr. Sandner, and I see others in the room from the Board of Trade, and I expect their similarity in testimony will convince us that all of you are prepared to cooperate with the New York Stock Exchange, the Chairman of the SEC and the Chairman of the CFTC on the five priority questions that I have indicated, to see that there will be a common understanding in that one industry about the response mechanisms we ought to have in the future. That is, first, clearing and credit mechanisms, second margin requirements, third, circuit breakers, and fourth, better information systems for that one market system.

Right? You said that.

Mr. **Melamed**. Right; absolutely.

Senator **Dixon**. Now let me say this to you. That at some timeframe soon, and I don't know how critically soon, we will look at that. Early on, Senator Brady said maybe it would take 6 months. I want to fairly represent the response of the Chair, who said, we won't have 6 months. We don't have that much time. We should act before 6 months. The Chair came back with the suggestion of 30 days. I might have a personal quarrel with that. I think at sometime in this committee, the committee, as it always democratically does, will make a response to that question of when there should be a decision on that.

The **Chairman**. If the Senator would yield, I wasn't talking about any action by the committee. I was saying for them to make a recommendation to us by March 4.

Senator **Dixon**. Oh, good. I apologize to the Chair.

The **Chairman**. That's all I asked.

Senator **Dixon**. Yes. Well, I didn't mean to infer otherwise.

The **Chairman**. Thirty days for that.

Senator **Dixon**. Yes.

The **Chairman**. Now we'll probably take several years to act on this. I won't be here. [Laughter.]

But I am beginning to resent this notion that we are trying to rush something through. We're not trying to rush anything through. We want to go as carefully as we can. There is no reason in the world why people can't tell us in 30 days. Is there any reason why they can't give us a recommendation? That's all I'm asking.

Senator **Dixon**. Well, I apologize to the Chair for indicating we were going to act in 30 days. I did not mean to say that, and if I said that, may the record be corrected, so that the record does show that the chairman suggested we wanted to get some responses on these questions in 30 days. And I respectfully suggest to the Chair that I meant to indicate that. If I did indicate otherwise, I didn't intend to.

But the follow-up point is this, that somewhere along the line, and I don't know what that timeframe will be, we will be asking the SEC and the New York Stock Exchange and you folks representing the futures industry and the CFTC, look, now what have you cooperatively discussed and what decisions have you cooperatively arrived at on all these issues.

You do understand that that time will come sometime soon.

Mr. MELAMED. I have no question it will come, and we will be prepared to respond in exactly the way you ask.

Senator DIXON. Now, just for the record, so that we can get some understanding of the timeframe, because Senator Brady had indicated 6 months, the Chair had indicated that was too long, and suggested 30 days. In your judgment, there have been some conversations, I take it, already with the New York Stock Exchange.

Mr. MELAMED. There have.

Senator DIXON. And I presume there have been conversations, Mr. Melamed, but between you and Mr. Mahlmann and Mr. Donovan from the Board of Trade and others as well.

Mr. MELAMED. Consistently, almost on a daily basis.

TIMEFRAME FOR RECOMMENDATIONS

Senator DIXON. Now then I would ask you this question. Do you have a reasonably sound judgment now about how long it will take on these four issues for you folks to have some kind of a common understanding with the Chairman of the CFTC and the SEC, so that the regulatory agencies over both of these important industries and the two industries are able to come in here with some kinds of responses to these critical problems?

Mr. MELAMED. Speaking only on behalf of the Chicago Mercantile Exchange, and from what I have been given on advice of the Chicago Board of Trade, we are absolutely ready to do that forthwith.

Senator DIXON. Well, in all fairness, can you do it in 30 days?

Mr. MELAMED. Well, I think if we are talking about the kinds of recommendations that we have suggested now, certainly. We're talking, however, other coordinated matters. That may take longer

Senator DIXON. Well, yes. Now I want you to understand the bottom line here, Mr. Melamed, is that it is your suggestions only. I say that with all due respect to you.

Mr. MELAMED. That's right, and that's why——

Senator DIXON. It is a common understanding between the two industries and the two regulatory agencies. Now I've been in the business of seeking accommodations for a long time now, and it takes some time sometimes when there are differences of opinion. I trust there are some differences of opinion.

Mr. MELAMED. I bow to your better judgment in this respect, Senator, because you are absolutely correct. Dealing with the futures industry is one thing. We have to deal with other elements in the marketplace.

Senator DIXON. Well, that is the point I want to get clear here, because the chairman pretty soon is going to be saying, let's have another hearing and let's see where we are going, and this Senator wants to know how long does it take to have response mechanisms in place in the industry and between the two regulatory agencies, so when Senator Dixon from Illinois says, OK, what about circuit breakers, you don't say, I think this. And Mr. Phelan doesn't say, I think this. And Mr. Ruder doesn't say I think this, and Mr. Hineman doesn't say I think that. And we've got four opinions. I want one.

Mr. **Melamed**. With respect to what you are now asking, I would suggest that from our experience with the New York Stock Exchange and the securities exchange, 6 months is not an unduly long time to expect that we could find ways to get together and coordinate and bring forth recommendations. So I would suggest 6 months. Six months is a much more realistic time period toward that result.

Senator **Dixon**. Well, are you prepared at any time in the oversight process, as this committee continues to function, to be able to come here four square with the committee on behalf of your industry to indicate to us that you are in very serious and very forthright and very open conversations with Mr. Ruder and Mr. Hineman and Mr. Phelan and his representatives in the New York Stock Exchange, seriously trying to find the solutions to these problems?

Mr. **Melamed**. We would be pleased to submit an interim report to this committee on that issue long before the 6 months is up.

Senator **Dixon**. I thank the Chair, and I am sorry if the Chair felt that I was tweakin' his chin for a moment there.

The **Chairman**. I didn't feel that way; I knew you were. [Laughter.]

Are there any further questions? Senator Graham.

Senator **Graham**. Mr. Chairman, just briefly, I wanted to ask a couple more questions on the globalization. I am concerned that there is an attitude developing that the United States has no economic sovereignty, that we have to go the lowest common denominator. If they do it on the Singapore Exchange, then we have got to do it, or we will lose an increment of business to Singapore.

What do you suggest are the perimeters of the United States economic sovereignty, as it relates to the security of the futures market? What steps can we take as a nation without having consequences of loss of market share?

Mr. **Melamed**. Well, I believe our markets are very competent markets. We were first to recognize the need and we were first to create the kind of markets that invited participation by the users that can use them. We were first to bring the business to the United States.

I think we are very competent in maintaining these markets here. As a matter of fact, I am proud to tell you that these markets, when left to their own devices, in terms of using their imagination, innovation and American know-how, will protect their market share. What we fear is an intervention by some forces that would regulate us out of ability to protect ourselves and then lose that market share.

That's the only thing we are concerned with. We are not concerned with foreign competition.

Senator **Graham**. Well, what would be some of the actions that you think might have that consequence.

Mr. **Melamed**. Well, some of the things we are discussing now, as a matter of fact. For example, changing the CFTC as an agency when it has deep expertise and is doing an extremely good job, would certainly not benefit our ability to compete. Also, any rule that favors a foreign competitor against us would certainly impede the process. Certainly, any margin requirements that are beyond the necessity of protecting the integrity of our marketplace would injure our system and would drive the market somewhere else.

Those are two areas very much of concern to us.

Senator **Graham**. What is the state of international comity among the markets in futures that currently exist—you say, Paris, London, and Southeast Asia, soon to be in Japan?

Mr. **Melamed**. They are desperately trying to create their own markets to invite this business to their shore, and we are doing everything we can to prevent that from happening.

I might tell you that the Chicago Mercantile Exchange announced a major deal and contract for 15 years with Reuters Holdings PLC in order to create a global electronic transaction system, so that the business stays in the United States. And the Chicago Board of Trade has devised a system of evening trade, extended trading hours, to invite foreign business to their marketplace. Both of these innovations are the kind of innovative spirit that exists in futures markets. We will fight to the death to keep the business in the United States if Congress will not impede that process.

Senator **Graham**. So the level of comity is not very high; is that right? [Laughter.]

Mr. **Melamed**. You say it well.

Mr. **Sandner**. Senator, there isn't one industrial country that isn't trying to capture a percentage of the futures industry. There isn't one. If you go from one end of the world to the other, you will see a fledgling futures market. You will see the individuals come in from the various countries to study our market to figure out what we do, and then they return to their respective countries to try to create a market. Ireland is the newest country trying to begin a futures market. Every single one of them are trying to begin a market.

The **Chairman**. Thank you, gentlemen, very much. You have certainly been very provocative and forceful and effective witnesses. Thank you.

Mr. **Melamed**. Thank you, Senator.

Our next witness is Mr. Joseph Hardiman, the president of the National Association of Securities Dealers.

Mr. Hardiman, you are a patient man, and we appreciate your patience.

Mr. **Hardiman**. Comfortable too, after that. [Laughter.]

The **Chairman**. Mr. Hardiman, you have our apologies for detaining you.

Mr. **Hardiman**. Thank you, Senator. I learned a good deal during that discourse as well, and I can tell you the seat is duly warmed and I am prepared, and I will try to be shorter and a little bit briefer in my comments and responses.

The **Chairman**. Thank you.

STATEMENT OF JOSEPH R. HARDIMAN, PRESIDENT, NATIONAL ASSOCIATION OF SECURITIES DEALERS, WASHINGTON, DC, ACCOMPANIED BY STEVEN L. HAMMERMAN, CHAIRMAN OF THE NASD BOARD OF GOVERNORS, AND FRANK J. WILSON, NASD EXECUTIVE VICE PRESIDENT AND GENERAL COUNSEL

Mr. **Hardiman**. My name is Joseph R. Hardiman, and I am president of the National Association of Securities Dealers. With me today are Steven L. Hammerman, on my right, who is chairman of the NASD Board of Governors and Frank J. Wilson, NASD executive vice president and general counsel.

I have previously submitted a written statement, which we understand will be incorporated into the record.

The NASD is a self-regulatory organization registered with the Securities and Exchange Commission as a national securities association pursuant to the Securities Exchange Act of 1934. The NASD is charged with the responsibility of regulating the over-the-counter securities markets in the United States. This task encompasses both the regulation of NASD member broker dealer firms and the regulation and operation of the NASDAQ markets, which constitutes the second largest securities market in the United States and the third largest securities market in the world.

In its request for testimony, the committee has asked the NASD to present its findings with respect to the stock market decline of October 1987 and any recommendations, legislative or otherwise, for the improvement of the efficiency and integrity of the markets.

Numerous studies of the events of October have been undertaken and the results of those studies have now been released. Until we have had sufficient time to digest the large volume of information contained in those studies, particularly the SEC's very comprehensive analysis, it may be somewhat premature for us to suggest definitively what the responses of the Congress and others should be.

During the October break, all securities markets faced difficult times with record volume and volatile prices. Notwithstanding this extraordinary volume and price volatility, the NASDAQ market remained open and functioning, albeit not perfectly, with transactions being executed continuously.

The telephone systems and the human components of our market were, as in other markets, overwhelmed at times by the flow of orders.

Access to the markets and the lack of timely pricing information were the most crucial problems for investors, both individuals and institutions.

On October 19 and 20, the surge of selling, coupled with rapidly changing prices, hindered the ability of overburdened market makers to update their quotations.

LOCKED AND CROSSED MARKETS

Thus, from time to time, market makers were entering offer prices that were equal to or less than the bid of another market maker in the same security, thereby producing what we call locked and crossed markets.

Senior NASD officials and the NASDAQ market surveillance section devoted considerable time during the week of October 19 to assist those firms in unlocking or uncrossing the markets.

When a market in a given stock is locked or crossed, trading in that stock by automated execution systems, including our small order execution systems, or SOES, ceases. Originally built into the system as a fail-safe mechanism to protect against inadvertent pricing errors, this feature had the effect of diminishing the value of the system during these fast-moving markets. This does not mean that transactions do not occur in the NASDAQ system, but only that the automated execution system for customer orders of up to 1,000 shares will not handle orders in a security where a quote is locked and crossed at that particular moment.

NASD ACTION

Responding promptly to the problems experienced in October, the NASD Board of Governors, with the support of the market making community, at its meetings in November and January, approved the following actions to facilitate access to the NASDAQ market and to provide timely execution of orders in high volume volatile markets.

First, participation in SOES will be required for all market makers in all NASDAQ/National Market System securities. This will provide order entry firms with public customer orders easier access to market makers during periods of heavy volume. Heretofore, participation in SOES had been completely voluntary.

Second, SOES orders will continue to be executed, notwithstanding a locked or crossed market condition. This will provide market makers with the economic incentive and discipline to keep their quotations current and will result in the continued operation of SOES, even during periods of extreme volatility.

Third, except in cases of narrowly defined excused withdrawals, if a firm withdraws as a market maker in a given security, it will be prohibited from resuming its market making in that issue for 20 business days.

All SOES transactions for NASDAQ/National Market System securities will continue to be subject to automated trade reporting, comparison and processing through the facilities of a registered clearing agency.

The NASD has taken another step to improve market access that became effective early in 1988, with the introduction of the service designated the Order Confirmation Transaction or OCT. This service will permit a broker or a market maker to direct orders of any size, both customer and proprietary, to a market maker by computer without the need for telephone contact.

Transactions executed through OCT are automatically reported to the NASDAQ system and instantly distributed to information vendors worldwide. Transactions are also sent automatically to the clearing corporation as compared trades, locking in all of the post execution steps involved in trade processing.

It is our belief that implementation of the SOES enhancements and OCT service will result in substantially increased investor access to the NASDAQ market and will enable investors to obtain current pricing information and more timely executions of transactions.

Furthermore, these actions have been praised in each of the completed studies of the October market break.

The NASD board of governors has reviewed the report of the Brady task force but not that of the GAO or the SEC. The NASD Board agrees with the general conclusions as to the interrelated nature of the markets in which securities and their various derivative products, including options and futures contracts, are traded and that it is highly desirable to coordinate actions taken to react to extreme conditions among those markets. Whether congressionally mandated or otherwise constituted. Those responsible for operating securities markets must plan, communicate and coordinate with each other on such issues as systems capacity and interfaces, potential halts of trading or the closing of an exchange or exchanges to ensure an integrated approach and to eliminate the need for ad hoc reaction to a unilateral decision on the part of one market.

Increased regulatory coordination among markets is clearly needed and can be delivered, in our judgment, within the existing regulatory framework.

Substantial portions of the October market studies were devoted to the interrelationship of the equity, options, and futures markets which allowed a relatively small number of major institutional investors to play an extremely significant role in the events surrounding the week of October 19. To a large degree, this activity was effected in markets other than NASDAQ, in that index arbitrage and portfolio insurance trading were not significant factors with respect to most NASDAQ securities.

Nonetheless, we are exploring the possibility of precluding execution of such transactions through SOES, which was designed and has been primarily used for automated executions of small orders for individual investors.

Capital adequacy of market makers and specialists was also discussed in the October 1987 market break studies. The NASD has constituted a special independent committee, chaired by former SEC Commissioner Irving Pollack, to examine a number of market structure issues, including a review of the capital requirements and all participants in our market. If it is concluded that increased capital is, in fact, needed to provide greater stability to the markets, the NASD will work closely with the SEC to implement the appropriate modifications.

In summary, we believe the NASD has acted quickly and clearly in identifying and addressing the most serious problems which occurred in the NASDAQ market during the October market crisis. In addition, we believe that the suggestions of the completed studies should be considered in conjunction with the report of this committee as well as others which will be forthcoming in an attempt to formulate well-reasoned and justified long-term solutions to the problems encountered in October.

Further, as detailed in my written statement, the NASD will carry out its regulatory mandate of investigating and taking action with respect to customer and other complaints which arose from the October market break relating to questionable activities by

NASD member firms. Through enhancements to the NASD arbitration program, we will continue to provide investors with an economical and timely method of obtaining redress for damages which may have been incurred due to improper activities by member firms or their personnel.

I appreciate the opportunity to make these views known to the committee.

[The complete prepared statement of Mr. Joseph R. Hardiman follows:]

TESTIMONY OF

JOSEPH R. HARDIMAN
PRESIDENT
NATIONAL ASSOCIATION OF SECURITIES DEALERS, INC.

BEFORE THE
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

UNITED STATES SENATE

FEBRUARY 4, 1988

My name is Joseph R. Hardiman and I am President of the National Association of Securities Dealers, Inc. ("NASD"). With me today are Steven L. Hammerman, Chairman of the NASD Board of Governors and Frank J. Wilson, NASD Executive Vice President and General Counsel.

The NASD is a self-regulatory organization registered with the Securities and Exchange Commission ("SEC") as a national securities association pursuant to the Securities Exchange Act of 1934. The NASD is the only association so registered. It is charged with the responsibility of regulating the over-the-counter securities markets in the United States. This task encompasses both regulation of NASD member broker dealer firms and the regulation and operation of the NASDAQ system, which constitutes the second largest securities market in the United States.

The NASD employs approximately 1,500 people to carry out its mission. The NASD has over 6,700 broker/dealer members employing 460,000 registered sales persons and principals. Over 5,500 securities are quoted in the NASDAQ system and 545 NASD members serve as market makers in those securities.

The NASD carries out its examination, disciplinary, and other regulatory responsibilities through its Washington headquarters and 14 District Offices located in major cities throughout the country. In addition to disciplinary committees that work with each District office, the NASD has a national Market Surveillance Committee that deals specifically with market and trading related issues. A committee of the Board, the National Business Conduct Committee, reviews as an appellate body the disciplinary activities of the District Business Conduct Committees and the Market Surveillance Committee, and seeks, to the extent possible, uniformity in disciplinary actions. Final disciplinary actions can be appealed to the SEC and then to the United States Courts of Appeals.

Oversight of the NASDAQ marketplace primarily is carried out by the Market Surveillance section of the NASD's Surveillance Department which utilizes an automated, centrally operated system, combining the technological resources of the NASDAQ system with surveillance procedures to monitor the NASDAQ market on a continuous basis in order to detect potential manipulative, insider trading, or other improper activities. The financial responsibility section of the Surveillance Department monitors member firms for compliance with the net capital and customer protection provisions embodied in the federal securities laws and SEC rules and regulations.

In its request for testimony, the Committee has asked the NASD to present its findings with respect to the stock market decline of October 1987 and any recommendations, legislative or otherwise, for the improvement of the efficiency and integrity of the markets. As you are aware, numerous studies of the events of October have been undertaken and the Committee will be presented with the results of several of those studies in these and other hearings. This being the case, in our judgment it is somewhat premature to suggest definitively what the ultimate response of the Congress, the regulators and the securities industry should be.

We believe, however, that the NASD has identified and has addressed those problems which were endemic to the NASDAQ market in October, that this corrective action will in the future improve the operations of the NASDAQ system during times of extreme volatility and, of greatest import, will provide improved access for individual investors. Indeed, the report of the Presidential Task Force on Market Mechanisms (the Brady Report) concluded that "after discussions about the problems encountered in October with several of the major market makers, the NASD took swift and dramatic action to help restore confidence in the over-the-counter market" and that "had the proposed rules been in effect during the market break, it is possible, if not probable, that most of the problems encountered in the execution of small orders in the over-the-counter market would not have occurred."[1]

Problems Encountered and Solutions Proposed

During the week of October 19, 1987, all securities markets faced difficult times dealing with record volume and volatile prices. Notwithstanding the extraordinary volume and price volatility, the NASDAQ market remained open and was functioning, albeit not perfectly, with transactions being executed continuously. The telephone systems and the human components of our market were, as in other markets, overwhelmed at times by the flow of orders. Access to the markets was the most crucial problem for investors, both institutions and individuals.

During the week of October 19, the NASD took a number of short-term actions to improve investors' access to the market. Senior NASD officials and the NASDAQ Market Surveillance section were in constant contact with market makers in order to address the difficulties being experienced by traders in performing their assigned tasks, such as receiving and executing orders, updating their quotations, and entering transaction reports. The NASD, as did other markets, also acted to shorten the trading day by two hours beginning on October 23rd to relieve some of the pressure on member firms and industry facilities caused by the unusual market conditions.

The NASD's Trading Committee and other participants in the trading community including representatives of the National Securities Traders Association, met on Saturday, October 31, to review the performance of the NASDAQ market making system. Everyone agreed that the major problem was one of access to markets. Customers, both retail and institutional, in many cases could not get through to their brokers and their brokers, in turn, had difficulty getting through to market makers and exchange specialists.

In the NASDAQ Market, the surge of selling coupled with rapidly changing prices hindered the ability of overburdened market makers to update their quotations. Thus, from time to time, market makers were entering offer prices that were equal to or less than the bid of another market maker in the same security - - thereby producing what we call locked and crossed markets. In addition, this occurred because of congested telephone traffic which inhibited market makers from reaching the firm having the best price. A great deal of effort and communication between the NASD and market makers during the week of October 19 was focused upon assisting those firms in unlocking or uncrossing the markets.

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[1] Report of the Presidential Task Force on Market Mechanisms, Study VI Performance of the Equity Market during the October Market Break and Regulatory Overview at page 63.

The NASDAQ Small Order Execution Systems (SOES) provides automatic execution of customer orders of up to 1,000 shares at the "inside" or best price. Today, SOES orders for a particular security are rejected whenever a locked or crossed market exists in that security, thereby diminishing the value of the system. This does not mean that transactions do not occur in the NASDAQ system but only that the automated order execution system will not handle orders in a security where a quote is locked and crossed at that moment. As previously noted, there was no time when quotations and transactions in NASDAQ ceased during a trading day.

As a result of meetings with market makers, a comprehensive series of recommendations for improving access to the NASDAQ market and for strengthening the commitment of market makers was developed. The NASD Board of Governors at its meeting in November considered these recommendations and proposed for comment actions to facilitate access to the NASDAQ market by individual customers. These proposals were again considered and approved in slightly modified form at the January meeting of the Board. The following changes are currently on file with the SEC and will become effective upon Commission approval:

- First, participation in SOES will be required for all market makers in NASDAQ/NMS securities. This will provide order entry firms with public customer orders easier access to market makers during periods of heavy volume. Heretofore, participation in SOES has been completely voluntary.

- Second, SOES orders in NASDAQ/NMS securities will continue to be executed notwithstanding a locked or crossed market condition. This will provide market makers with the economic incentive and discipline to keep their quotations current, and will result in the continued execution of transactions of NASDAQ/NMS securities through SOES even during periods of extreme volatility.

- Third, except in cases of narrowly defined excused withdrawals, if a firm withdraws from NASDAQ as a market maker in a given security, it will be prohibited from resuming its market making in that issue for 20 business days.

- Fourth, the proposals will allow the NASD to provide for tiered maximum order size limits for classes of securities having differing trading characteristics.

All SOES transactions for NASDAQ/NMS securities will continue to be subject to automated trade reporting, comparison and processing through the facilities of a registered clearing agency. These steps result in efficient dissemination of transaction information and trade settlement.

The NASD has taken another step to improve market access that became effective early in 1988 with the introduction of a service designated the Order Confirmation Transaction (OCT) service. This service will permit market makers to direct their orders of any size, both customer and proprietary, to a specific market maker by a computer, without the need for telephone contact. The order is received on the NASDAQ screen of the market making firm. From the information displayed, a market maker is able to accept or reject the order simply by pressing several keys on the terminal keyboard. The firm entering the order then automatically receives an acceptance confirmation or rejection notice on its NASDAQ terminal. Orders not responded to within two minutes will be treated as rejected.

Transactions effected in NASDAQ/NMS securities through OCT are automatically reported to the NASDAQ system and instantly distributed to information vendors worldwide. Transactions are also sent automatically to the clearing corporation as compared trades, locking in all of the post execution steps involved in trade processing. This new service should reduce the dependency on telephones during periods of exceptionally high volume in the NASDAQ market, thereby alleviating access problems such as were encountered during October.

It is our belief that the implementation of the SOES enhancements and OCT service will result in substantially increased investor access to the NASDAQ Market and will enable investors to obtain more timely execution of transactions.

Another area in which the NASD took direct and immediate action that had very positive results related to resolving unmatched trades in the NASDAQ market. The NASD maintains a Trade Acceptance and Reconciliation Service (TARS) for its NASD members which allows participants to reconcile their uncompared over-the-counter transactions on line computer-to-computer. Since its inception in 1982, this system has accounted for a substantial reduction in the uncompared rate of transactions in the market and is currently utilized in resolving approximately 85% of all uncompared over-the-counter transactions processed by registered clearing agencies.

During the market break in October, the NASD expanded the operating hours of TARS. The system also operated on the two Saturdays following October 19 in order to enable member firms to reconcile the large volume of transactions that had been executed. The percentage of uncompared trades increased for the three trading days following October 19 and peaked at eleven percent on October 22. By the following day, however, the rate had fallen to five percent which is within the normal range.

The NASD has taken steps to ensure that the advantages of TARS participation will be utilized to the greatest degree possible. At its January meeting the Board adopted amendments to the NASD By-Laws and rules which will require utilization of TARS by all NASD members participating in a registered clearing agency.

Finally, the NASD is in the process of adopting other amendments to its By-Laws to enable its President and Board Chairman to expeditiously take emergency actions, if required, during periods of highly volatile market conditions.

When all of these proposals are in place (which we reasonably expect to be no later than the second quarter of 1988), we believe that the ability of the NASD and the NASDAQ market to react to extraordinary market conditions will be greatly enhanced and that investors will be benefitted.

October 1987 Market Break Studies

The NASD Board of Governors has reviewed the report of the Brady Task Force, but not those of the GAO and the SEC. The NASD Board agrees with the general conclusions as to the interrelated nature of the various markets in which securities and their various derivative products, including options and futures contracts, are traded and that it is desirable to coordinate actions taken to react to extreme conditions among those markets. Whether congressionally mandated or otherwise constituted, those responsible for operating securities markets must plan, communicate and coordinate with each other on such issues as systems capacity and interfaces, potential halts of trading or the closing of an exchange or exchanges to ensure a coordinated approach and to eliminate the need for ad hoc reaction to a unilateral decision on the part of one market. Increased regulatory coordination among markets is clearly needed and can be delivered within the existing regulatory framework. Numerous other recommendations are contained in the three governmental studies which require careful consideration by the industry and the Congress.

Substantial portions of the October Market Studies were devoted to the interrelationship of the equity, options and futures markets which allowed a relatively small number of major institutional investors to play an extremely significant role in the events surrounding the week of October 19. To a large degree, this activity was effected in markets other than NASDAQ in that program-type trading, as well as trading in derivative products was not a significant factor with respect to most NASDAQ securities. Nonetheless, we are exploring the possibility of precluding execution of program related transactions through SOES, which was designed and has been primarily used for automated execution of small orders for individual investors.

As I have previously indicated, and the three studies have confirmed, the NASD has taken swift and dramatic action which we believe will substantially reduce the problems of market access in a future crisis situation by mandating SOES participation, penalizing withdrawal, allowing SOES to continue to function irrespective of locked and crossed markets and by the implementation of OCT. In the future a far greater percentage of transactions will be able to be executed computer to computer thereby alleviating the overburdened telephone lines and allowing traders and investors to make contact in order to execute those transactions where person to person contact is necessary.

Furthermore, the NASD has formed a special committee of the NASD's Regulatory Review Task Force to study a number of structural and quality of market issues, including standards for companies and market makers, market maker capital and obligations, market liquidity, adequacy of communication systems and the impact of international trading. The Regulatory Review Task Force which was appointed in early 1987 to conduct a comprehensive reivew of the regulatory policies, practices and procedures of the NASD and to render recommendations for strengthening the NASD surveillance and enforcement processes, is chaired by former SEC Commissioner A. A. Sommer. The special committee is being chaired by a member of the Task Force, former SEC Commissioner Irving Pollack and includes representatives of market makers, issuers, and investors, including the president of the 100,000 member American Association of Individual Investors. The conclusions of this committee, which is scheduled to report to our Board in May, will enable the NASD to focus first upon additional changes, if any, needed within our own market and then upon those intermarket issues, both domestic and international, which must be addressed.

Other Issues and Actions

Capital and Operating Condition of Market Makers The issue of capital adequacy is key to any concern for investor protection because the financial and operational viability of market makers and clearing firms is essential to the continuation of a liquid market. For that reason, the NASD has always emphasized these areas when examining its member firms and in its financial monitoring programs. This emphasis was accelerated during October.

As a result of the more than 90 point drop in the Dow Jones Industrial Average on Wednesday, October 14, 1987, and general market weakness over the prior weeks, on October 15, the NASD through its Surveillance Department required each of the 14 District Offices to review all firms conducting a general securities, options, or municipal securities business for which the NASD had financial responsibility, with particular emphasis on those with proprietary positions. Following a discussion with a senior staff official of the SEC on October 16, a decision was made that on Monday, October 19, this review would be intensified to focus special monitoring activities on firms with proprietary positions that were self-clearing, thus presenting potential customer exposure.

During the week of October 19 to 23, 1987, the Surveillance Department was in continual contact with the NASD's 14 District Offices, the SEC, the N.Y.S.E. and other regulatory agencies regarding the monitoring of potential problem firms. The Districts utilized the automated FOCUS Report analysis system to identify firms that would most likely experience financial problems in a declining market, i.e. those with extensive proprietary positions, extensive customer debits and particularly margin debits.

Daily contact was maintained with the Districts throughout the week. The intensified financial monitoring found no self-clearing firms in serious financial difficulty but we continued to watch them closely because of their potential for customer exposure and risk. We also expanded the scope of our surveillance efforts to focus attention on firms that introduced business on a fully disclosed basis and thus did not present a danger to investors because they did not carry customer accounts. As the monitoring continued, we found that it was these introducing firms that were encountering serious financial problems, due primarily to liabilities that were generated by a failure of the firm's customers to meet margin calls made by the clearing broker, and the ensuing deficits that were created when customer positions were sold out. Under most fully disclosed clearing agreements, the introducing firm must assume liability for these deficits. With the relatively limited capitalization of firms of this type, the liabilities exceeded their net capital thereby causing their financial demise. In total, 57 firms for which the NASD was the designated examining authority ceased conducting a securities business as a result of the October market decline. Of these, 28 reopened and 29 continue to remain closed. None of the 29 firms maintained customer accounts and thus no investor was exposed to a loss as a result of a member's demise.

On Friday, October 23, all NASDAQ market makers were notified that they were required to staff trading desks and operations departments on Saturday, October 24, 1987, to work on uncompared trades in order to facilitate the settlement process. All NASD District Offices were also staffed on Saturday, to verify through on-site visits and telephone calls that members were complying with the mandatory staffing requirement, as well as to discuss the uncompared rate, unfilled customer orders, problems with telephone access, and their experiences with customers honoring commitments and in meeting margin calls.

During the week of October 26, the NASD continued its financial and operations monitoring activities. Clearing firms, National Securities Clearing Corporation (NSCC) and the Midwest Securities Clearing Corporation (MSCC) were contacted as we continued to review the impact of uncompared trades as transactions from the prior week began to settle. The majority of District staff were devoted to on-site inspections and in office verification of members' financial condition, supplemented by visits from senior staff members from the Surveillance Department in Washington.

Capital adequacy of market makers and specialists was discussed in the October 1987 Market Break studies. We believe that the adequacy of capital to support a particular market in a security is more likely to be a problem in the context of a single specialist than in the context of competing multiple market makers. The Pollack Committee, nonetheless, has as one of its charges a review of the capital requirements for participants in our market including introducing firms, clearing firms and market makers. If it is concluded that increased capital is in fact needed to provide greater stability to the markets, the NASD will work closely with the SEC to implement the appropriate modifications.

Customer Complaints While the changes we have implemented will assure improved access to the NASDAQ market in the future, we cannot overlook the fact that during October some customers faced difficulty having orders executed or other instructions implemented. The NASD is taking steps to assure that these customers can fully utilize the mechanisms for redress of grievances that the NASD has long provided.

The NASD Rules of Fair Practice, which are the cornerstone of the NASD's self-regulatory structure, provide that members must conduct their business by observing "high standards of commercial honor and just and equitable principles of trade." The NASD rules address such issues as suitability of recommendations, execution of customer orders in a fair and timely manner under prevailing market conditions and prohibitions on the use of deceptive or fraudulent devices in conjunction with securities transactions. These rules are enforced through NASD disciplinary actions that can result in censure, fine, disgorgement of ill-gotten profits, suspensions, bars or expulsions which are tantamount to removal from the securities industry. Disciplinary actions may result from NASD initiated examinations and investigations or from customer complaints.

An integral aspect of the NASD's regulatory policies and procedures includes an extensive program for investigating each written customer complaint received from the investing public. All such complaints are initially investigated through the 14 District Offices. The purpose of these investigations is to determine whether securities regulations have been violated and whether customers have been treated fairly in accordance with existing rules. A written report is prepared for each customer complaint, and the findings of such investigations are presented to a District Business Conduct Committee ("DBCC") for review and consideration as to whether, and if so, what disciplinary action should be taken.

For the first nine months of 1987 through September 30, a total of 3,737 written customer complaints had been received by the NASD, thus averaging 415 per month. During October 1987, 372 customer complaints were received, in November, 673 and in December 550. Thus, for the months of October, November and December 1987,a total of 1,595 complaints were received as compared to the 1245 that on an average would have represented a normal three month volume of complaints, a 28.1% increase. This is not surprising, in view of the events of October.

The NASD received a total of 327 written customer complaints that related specifically to the October market decline. The NASD has computer captured this information and an analysis has disclosed the following:

Subject Matter of Customer Complaint

Non-execution of order	25%
Delayed execution of order	15%
Liquidation of position or account without notice to investor	6%
Execution at a price different that one quoted	5%
Inability to contact broker	4%
Insufficient time to meet margin call	4%
Insufficient notice of (maintenance) margin calls	3%
Inability to get or delay in receiving oral confirmation	3%
Execution not in accord with stop or limit order	3%
System problems related to order execution	3%
Complaints of bad advice or that representatives did not meet fiduciary obligations	3%
Other	26%
	100%

This computerized format will identify the firms and registered persons against whom these complaints were filed, the substance of the complaint, the type of security involved, and the market place in which the problem occurred. Action, as warranted, will be taken by the appropriate districts.

Arbitration Another important customer protection aspect of the NASD's operations is its arbitration program. We are currently receiving approximately 17 claims per day as opposed to 7.6 per day prior to October. We expect an increase in the coming months, due to a number of factors including the events of October and a recent Supreme Court decision requiring customers to arbitrate disputes with members where they have executed pre-dispute arbitration agreements. In 1987 we received 2886 new cases as compared to about 1600 in 1986.

To cope with this increase, we are (i) adding 15 people to the staff of our Arbitration Department, bringing it to a total of 65; (ii) opening a new arbitration office in Florida to augment our existing offices in New York, Chicago, and San Francisco; and (iii) seeking to increase our public arbitrator pool to process the increased caseload.

Even with our present personnel resources, the Arbitration Department closed some 1,600 cases in 1987. About 42% of cases were withdrawn or settled prior to hearings. Among the 867 decided by arbitrators, 642 involved public customers, while the others were employee-versus-firm, or firm-versus-firm cases.

In addition to handling more cases, we are also making qualitative improvements in our arbitration program. Our National Arbitration Committee and the NASD Board of Governors have carefully considered a series of suggestions recommended by the SEC. In that connection, we have advised the SEC that, among other things, we will:

- Establish more precise criteria for the selection of public arbitrators, to assure their independence from the securities industry.
- Increase training programs for arbitrators.
- Increase public information on awards by specifying the type of factual issues raised in complaints, the relief sought, the amount awarded, and the issues decided by the arbitrators.
- Implement pre-hearing exchange of documents and discovery conferences with the staff.
- Improve the efficiency of our Arbitration Department staff through increased automation applications.

These enhancements, we believe, will permit our Arbitration Department to cope with its growing caseload as well as improve the public's perception of the fairness of the arbitration process. We believe arbitration should provide public customers and member firms a way to resolve disputes that is fair, timely, and inexpensive. As we implement these changes, we will strive to maintain those principles.

* * *

In summary, we believe the NASD has quickly and clearly identified the most serious problems which occurred in the NASDAQ market during the October market crisis. We have initiated important changes in the manner in which the market functions to assure improved public access to the market and to minimize the recurrence of the problems encountered in October. In addition, we believe that the recommendations of the three completed studies should be considered in conjunction with the report of this Committee as well as others which will be forthcoming in an attempt to formulate well reasoned and appropriate long term solutions to the problems encountered in October. The NASD will also continue to carry out its regulatory mandate of investigating and taking appropriate action with respect to customer and other complaints relating to questionable activities by NASD member firms. Finally, we will continue through the enhanced NASD arbitration program to provide investors with an economical and timely method of obtaining redress for damages which may have been incurred due to improper activities by member firms or their personnel.

I appreciate the opportunity to make these views known to the Committee.

The **CHAIRMAN**. Well, thank you very much, Mr. Hardiman. Mr. Hardiman, the OTC experienced a severe breakdown of the Small Order Execution System on October 19 and 20. The Brady Commission report suggests it was this breakdown that led to a spillover that backed up the phone lines.

Do you agree with the Brady report's characterization of the crisis in the over-the-counter market?

Mr. **HARDIMAN**. I don't agree with the characterization that it was a breakdown. There were problems with the Small Order Execution System, in that it did not execute transactions in markets when they were, in fact, locked or crossed. On October 19, the Small Order Execution System executed four times its average daily normal volume. So it was functioning. It was not functioning perfectly. To the extent that it was not functioning perfectly, it did cause spillover, and it did exacerbate telephone problems. Hence, the reasons for the proposed changes to that system.

PROPOSED RULE CHANGES BY NASD

The **CHAIRMAN**. Specifically, what changes has NASD proposed, in view of the problems experienced in October?

Mr. **HARDIMAN**. Well, specifically, we are requiring that anyone who is making a market in our national market system stocks which constitute 3,000 of our 4,700 issues, must also be a market maker in the SOES system. Prior to this, it was entirely voluntary, and about 230 of our 545 market makers participated in that system. When these rules are approved by the SEC, all 545 will either have to participate in the SOES system, or they will have to cease their market making activities. In addition, we are putting into place some significant penalties for people who withdraw from their market-making responsibilities.

The **CHAIRMAN**. Well, that's encouraging. The exchanges are, understandably, proud for processing record volume, and I might say that Senator Sasser of Tennessee, who is sitting over here, has been particularly strong in questioning witnesses about what has happened to the typical average investor, the nonprofessional investor, and he has made an excellent—I think, an excellent documentation for the committee that there have been very serious problems.

Clearly, exchanges did not handle all the demand for purchases and sales. The evidence for this is clear. Countless individual investors failed to reach their broker. Individual stocks were closed for long periods when specialists were unable to find buyers for a stampede of sellers.

MEASURES TO MEET TRADING DEMAND

What steps should be taken, if any, to meet the surges of trading demand in the future, if we have another situation like this?

Mr. **HARDIMAN**. We share Senator Sasser's concerns about the relative opportunities for the individual investor. It is particularly true of our market, because some 70 percent of the share ownership in the NASDAQ market is vested directly in individuals who also own about 67 percent of the market value and are responsible for about 60 percent of our transactions. The importance of the individual investor to our market cannot be overstated.

We took a look at what happened to that individual investor during the period of October 19 and 20, and we examined the average price of trades of less than 1,000 shares on those days and found that those trades were executed at prices equal to or slightly higher than the larger trades.

We also examined, in detail, the 50 most active stocks, and our trade data shows that orders of 500 shares or less increased during the stock market break.

What we are seeing is that our market makers were paying attention, closer attention to the importance of that individual investor and they were executing transactions for the individual investor at prices that were equal to or better than those for the larger investors and were devoting more of their time and attention to servicing that individual investor.

Going forward, I think some of the changes that we have already mentioned, for instance, the enhancement of the SOES systems, which was designed for and has been primarily used by individual investors to automatically execute the transactions, will facilitate and enhance the ability of those investors to execute the transactions in our marketplace.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman. I share this concern about treatment of the small investor, the small shareholder on the 19 and the 20, not just in your market but across all the markets, and I think the evidence shows that a lot of small investors were hurt, that for whatever the reasons, the overload in the system or market makers stepping back, maybe not answering their phones in some cases, not just having the phone lines jammed, that there was a breakdown.

Now it is significant to me that you have come in today to report to us that you've taken a series of steps. In other words, you've made some adjustments in terms of how your market works. And I take that to mean that you feel that looking back, in light of the experience, that it was not engineered the way you'd like to have it be, and now you're doing some reengineering, and you think these changes are going to be constructive, that they are going to afford more protection to investors.

Is that a fair summary?

Mr. HARDIMAN. That is a fair summary, and I would not disagree with anything that you said.

Senator RIEGLE. Now let me ask you another question, because I am very concerned about the impact to the stock market break on the capital formation process in the country, because I think we have an extraordinary problem of both saving money, investing money, investing in ourselves as a nation, especially in light of the competitive world economic pressures that we are experiencing, the huge trade deficit and other things.

It seems to me that your market is one of the most important markets we have, because it is sort of upstream, closer to the capital formation process. Your trading is still dominated by individual traders, most of the transactions are by individuals and not the big institutional portfolio managers, and so forth. And it seems to me that gets closer to the wellspring of companies being able to go out and raise money, in other words, to take their companies out into the public arena and to actually start and to grow companies. And that is really, in very large measure, the key to our future.

I have been reading more and more stories and hearing more and more reports that since the market break in October that we have seen the capital formation process, if you will, damaged somewhat, and that it is harder to raise equity capital, that investors are more squeamish of the kind that would help bring companies to the capital they need to grow, and so forth, and that we may be seeing a follow on effect that could be damaging us for the future, maybe retarding our economic growth for the future because of that.

I want to know from your vantage point whether those kinds of observations are correct or what do you see in that area?

CAPITAL RAISING MECHANISMS

Mr. **Hardiman**. Senator, we share your concern that the capital raising mechanisms for small and medium-sized companies in our country may have been impaired. Since October 19, there has been a marked decline in the number of companies who have offered equity securities to public investors, and I think that is simply because the market has not been there to accept those issues. The window, so to speak, has been closed since October 19 for not only new issues but secondary issues of small to medium-sized companies.

We are seeing in just the last 10 days, as the markets have begun to stabilize somewhat, that there have been some issues that are coming to the marketplace again and although they have been few in number, less than five, I would suggest, in the equity markets in the last week, that they have been received well by investors. So we are hoping that we are seeing a crack in that window, the window is beginning to open slightly, and that as the markets stabilize, as there is increasing confidence, hopefully, by investors, particularly individual investors in the actions that we have taken, as well as in the focus that this committee and the Brady report and the Commission are placing on the marketplaces, that as that confidence grows, that window will open further, and we will be able to see the capital raising mechanisms at work again.

Senator **Riegle**. Well, I think this is very important, and I want to just say to the chairman, over the last 3 days, we heard a lot of things in the committee. We heard a long discussion the other day about the goose that laid the golden egg, and how we can't do anything because we don't want to impair the ability of the goose to lay the golden egg. And it seems to me that the capital formation process, the capital investment process, you know, the money that is needed to create and build these companies and create these jobs is absolutely at the heart of our system, and if that gets damaged or if confidence erodes in that area, this country is in big trouble, and it is in bigger trouble than just the erosion of, say $1 trillion worth of U.S. stock values over a very short period of time. And that is an enormous problem.

But if we find something that starts to freeze or cripple that capital formation, capital investment process, then we are going to lose a great big part of our future, and we are not going to be able to do much of anything we might want to do, public or private.

This is why I think this committee and the Congress and all of the related entities, including the self-regulatory institutions here, have a public responsibility, in addition to their own constituent responsibilities, to find the reengineering that's got to be done to forestall another collapse of this kind, whether it is to forestall the inflated blow up of prices, and hopefully, to try to deal with the sudden collapse of prices, so that we don't have this secondary set of effects, that we lose investor confidence, psychology goes the wrong way, in a country with a $170 billion trade deficit, as we have today, can't solve it's problems.

I mean, I think this is extraordinarily important that we zero in on this.

I would like you to give the committee what data you have. Your phrase was something to the effect that the window closed or that the money dried up, or whatever you said here a couple of minutes ago. I would like you to document that as well as you can, because I think this is part of what we have to be able to take to our colleagues in the Senate, to say that whenever we decide on what the reengineering design is, how much of it's self-regulatory agencies, how much of it's Government mechanisms and whatever. The compelling side of the argument for putting that stronger system in place relates very importantly to the question of whether we as Americans continue to invest in ourselves and invest in our own economic future.

Mr. **Hardiman**. We share your concern and observations, and also our sense of responsibility in facilitating that process, and we will respond to your request for information. We have it, and we will submit it in the very near future.

Senator **Riegle**. Thank you. Thank you, Mr. Chairman.

The **Chairman**. Senator Heinz.

Senator **Heinz**. Mr. Chairman, thank you very much.

First let me apologize to you, Mr. Chairman, my colleagues and our witnesses for not having been able to be here earlier, although I did meet with some of the witnesses earlier before the hearing began. It's one of those 10-strike of a day's, where we had a markup and a hearing in the Finance Committee, on welfare reform. I had to testify before the Rules Committee on the Aging Committee budget. I testified before the Environment and Public Works Committee on a bill to prevent oil spills.

And I must say, it is nice to see my colleagues on the Banking Committee, after what has been an interesting morning already. And we've got another minute before it expires—the morning, that is.

The **Chairman**. It expired 20 minutes ago. It's 20 minutes past 12.

Senator **Heinz**. How time flies! [Laughter.]

That's what I get for looking at my second hand. I knew it was going fast.

Thank you, Mr. Chairman. Let me say, I am glad that Mr. Hardiman is here. I note, Mr. Hardiman, that the NASD has indicated that they feel that perhaps some changes should be made. Let me just ask you, in case I've missed something. If you've been asked this, I apologize. That is the penalty of coming in late is to repeat history, I suppose.

INCREASE CAPITAL LEVELS

Should the capital levels of market makers and specialists be raised?

Mr. **Hardiman**. Well, we believe that we ought to take a careful look at that issue, and we have a committee being chaired by Irving Pollack, a former SEC commissioner, focusing on that specific point. In all probability, and I don't want to preclude the judgment of that committee, we will recommend that the capital requirements for not only market makers but also clearing firms and introducing firms in our market be increased.

To do that, we will have to have the cooperation of the Securities and Exchange Commission, because they set the capital rules and requirements for our marketplace

Senator **Heinz**. Now I gather that when you make those kinds of proposals, that you get complaints. We certainly get expressions of concern that such rules might end up discriminating against small firms.

Is it possible that such changes do discriminate against small firms, and of so, how?

Mr. **Hardiman**. We also receive similar comments, Senator Heinz, and we are concerned about that, because the small firms do play a very viable role in maintaining secondary markets in local and regional securities throughout the country. In taking a look at, not only capital rules and requirements, but also changes to our market mechanisms, such as SOES, we have tried to accommodate them by tiering our securities in the market making process to allow smaller firms to have less of a fixed requirement to execute SOES transactions for smaller issuers, and we graduate up the line to the larger firms and the larger issuers.

In the past, when we have taken a look at it, we have tried to accommodate smaller firms. That said, the other side of the equation is that we must take steps to make sure that market makers are adequately capitalized to perform their task and to protect the individual investor in the marketplace.

The financial and operating condition of our members is of key concern to us. We spent a good deal of time during the market break—in fact, the overwhelming part of our regulatory efforts were devoted to making sure that our members were retaining their financial and operating integrity. We were pleased that no customer in our market suffered any losses, as a result of a default by one of our firms.

Senator **Heinz**. I gather, at least from the news reports I read—I haven't had a chance, I am sorry to say, to read your or all the testimony for this morning, that there were an alarming number of—at least for a while, of unmatched trades. Is that correct?

Mr. **Hardiman**. In our marketplace, we call them uncompared trades, and the normal rate of noncomparisons is about 5 or 5½ percent. During the week of October 19 that increased to 11 percent and then by Saturday of that week, because we had our systems open and people working on a daily basis, that rate was back down to the 5-6 percent level.

Senator HEINZ. Under the current system, if I am a customer, and I telephone one of your dealers, and I say sell at—what's the price? He says $12. I say, sell. He says, OK. He is not, as I understand it, obligated at that price, because it is a verbal communication.

Am I right or am I wrong?

Mr. HARDIMAN. Well, if you are going into a firm that is a market maker in a particular security, and he is acting in his capacity as a market maker, he has an obligation to execute that trade for you at the best price in the marketplace, and that is the inside bid or ask. If he is not a market maker in that particular security, then he has an obligation to take it to the market maker who is offering the best bid or ask, the inside price, or to a market maker who will match the inside or best price. So that, in theory, you should be getting the best price in the marketplace at that particular moment.

Senator HEINZ. Now as I understand it, you are in the process of moving away from telephones to computer to computer execution; is that right?

Mr. HARDIMAN. That is correct. We felt that the telephone systems were a major bottleneck in our marketplace during October.

Senator HEINZ. To return to my question, in a computer to computer system, it would seem to me that you would be obligated or your dealers would be obligated at specific prices, because of the instantaneous linkages that the computer makes possible.

Under the current system as you described it a moment ago, there's a best effort, but no guarantee; is that right?

Mr. HARDIMAN. There is a guarantee for orders of up to 1,000 shares in our SOES system, Senator, which is our only truly automated, fully automated execution system at the moment. So that if an individual customer were to come in with an order of up to 1,000 shares of one of those stocks, it would be put into our Small Order Execution System and automatically executed at the best or inside price at that particular time, and that would be enhanced under our proposals, because all market makers would have to participate in that system.

Senator HEINZ. If the chairman and my colleagues will give me 30 seconds more, I would be indebted.

The CHAIRMAN. Go right ahead.

Senator HEINZ. Now—and perhaps I am wrong, but it is my understanding that you allow program traders to use the Small Order Execution System; is that correct?

Mr. HARDIMAN. We don't have any prohibition against that currently, but I can assure you, Senator, that since only 28 of our stocks are in the S&P 500, it has been used very lightly, to our knowledge, for that purpose. Program trading, particularly in the guise of index arbitrage trading, is not a significant factor in our marketplace. As I mentioned in my prepared testimony, we have under active consideration a proposal to ban the use of program trading through the SOES system, which was a system designed for the execution of individual investor orders.

Senator **Heinz**. If it is not a problem, why do you propose to ban it?

Mr. **Hardiman**. Basically, because we feel that the system should be used for the purpose for which it was originally designed, and second, we don't want it to become a problem.

Senator **Heinz**. Thank you very much. My time has expired.

The **Chairman**. Senator Sasser.

Senator **Sasser**. Thank you, Mr. Chairman.

WITHDRAWAL BY MARKET MAKERS

Mr. Hardiman, both the Brady Commission and the General Accounting Office state that many market makers on the NASDAQ exchange withdrew from making markets during the week of October 19. Some market makers on the NASDAQ withdrew by simply not answering their telephones, we're told. Others were overwhelmed by the calls, and according to the NYSE we've heard reports that if you wanted to sell Apple Computer stock, for example, on Monday, October 19, you just couldn't sell it, unless you went out and found a buyer all your own.

What is your response to that? Is it true?

Mr. **Hardiman**. Well, my response to that is that it is an inaccurate portrayal of our marketplace. In fact, Apple Computer traded 4.3 million shares on October 19 through a record number of transactions, and on October 20, it traded 5.2 million shares in our marketplace, through another record volume of transactions, so that our market did not disappear. We were executing at record volumes on those days. Customers could get executions on a continuous basis. I think in the SEC study, you will note—and also the Brady task force report—that it was commented upon that trading did continue during any 15-minute period examined in all stocks that they took a look at in our marketplace.

So there were continuous transactions being executed. And buyers and sellers who got into the marketplace could execute a transaction. The major problem in our marketplace, as I mentioned earlier, was one of access, and that is a problem that we have addressed.

Senator **Sasser**. Well, what kind of complaints have you been getting from investors, since October 19?

Mr. **Hardiman**. Senator, we have received 327 written complaints about the events of October 19 and 20. We received about 2,000 telephone calls during that period of time. We always advise customers that if they want to have disciplinary action taken against any of our members to submit those complaints in writing. So we received 327 written complaints. We are investigating those currently. About 60 percent of those dealt with executions or lack of executions or executions of prices that customers felt were inappropriate. We are investigating each one of those complaints, they will be taken through our normal investigatory actions, and they will be submitted to our disciplinary committees, of which we have 14 throughout the country. If they feel that our members breached our rules, or that there were violations of any of our regulations, appropriate disciplinary action will be taken.

That doesn't give the customer redress, however. If the customer wants redress, they must use the arbitration process or the courts.

Senator Sasser. Do you have a system for taking customer complaints? In other words, the State securities people set up toll-free hot lines to take complaints. Does your organization have any system for taking complaints?

Mr. Hardiman. We have no formal system as such. What we do have and have had for a number of years is 14 offices which are in the major cities in various regions of the country. And in each of those offices, we have a staff of some size. We have a portion of each of those staffs designated to receive and to act upon customer complaints. So many of the customers in our marketplace, when they have a complaint, either as a result of the events of October 19 or as a result of other events in the marketplace in other times, usually they will call the district office of the NASD or of the SEC, which also has regional offices around the country, and those complaints are referred into our district staff that focuses upon dealing with customer complaints.

Senator Sasser. But there's been no outreach then, I gather, on the part of the NASD to try to reach out and find out what the customers were saying, what the complaints were. In other words, if a customer sits down and writes you a letter and, they know where to write, or if they take the initiative to call you, they'd know where to call. You will receive the complaints. But as far as taking an affirmative outreach and trying to find out what the problems were during those critical days, have you done any of that?

Mr. Hardiman. Well, we basically have been out to talk to all—not all of our members, but a number of our members who were active during that period of time.

Senator Sasser. How about the members' customers?

Mr. Hardiman. We have not directly solicited members' customers. As you probably are aware, NASAA has done that through a hot line which it established, and they received a——

Senator Sasser. Yes, NASAA received 7,000 calls, and then they later learned that there were 103,000 calls that didn't get through.

Mr. Hardiman. I'm not aware of that latter number, but they did receive 7,000 to 8,000 calls, as reported to us by NASAA, about the problems of the October 19, 20 environment. Now NASAA did, I think what we do, and that is, they say to those customers, if you wish to pursue that, please submit your complaints in writing, and we will pursue them. I think it is difficult to pursue complaints as a result of a telephone inquiry or a telephone expression of disappointment. If the customer wants to pursue it, we ask him to put it in writing, and if they do, we actively pursue it then.

Mr. Wilson. I think one additional thing should be made clear in connection with customer complaints. When written customer complaints are received, each of those customers is contacted, and each of those customers is talked to as to the nature of his complaint. Each of those complaints are thoroughly investigated by our district committees around the country, as Mr. Hardiman alluded to.

I just didn't want that fact to get lost. We do go after those customers. We do talk to them and pursue those complaints.

Senator **Sasser**. Well, I suppose my point is, I am wondering why there isn't some affirmative outreach to these customers. We were confronted with frustrated investors on the network news during the week of October 19, saying that they couldn't get their brokers on the phone. I have received numerous letters. These people lost everything, because they couldn't trade. Whether that is an accurate assessment or not, its out there in the body politic. I think there are literally millions of small investors in this country that have come to the conclusion that investing in the stock market is not for them, and I think that is going to make it more difficult for us to secure the capital that we need to modernize our economy in this country.

Now you say there was virtually no program trading on NASDAQ, and I understand that is true. Well, why was there so much volume and volatility there? Why were there so many problems on the NASDAQ, if there was no program trading?

Mr. **Hardiman**. Well, we get asked that question usually in a different context, and that is, why wasn't the volume greater during that period of time, given the significant increase in the volume in the New York Stock Exchange? And the real reason, I think, Senator, was that a good portion of the volume that we saw on the New York Stock Exchange was as the result of institutions who were engaging in various types of program trading, and that most of the volume in our markets was through normal trading by both individual and institutional investors. So that our volume, in terms of share volume traded increased proportionately less than that of the markets in which program trading did take place.

Senator **Sasser**. But there was a substantial increase in volume even without program trading?

Mr. **Hardiman**. Oh, yes, sir. The increase in volume was up about 60 percent on Monday, the 19th, and it was up approximately 100 percent on Tuesday, the 20th.

Senator **Sasser**. And there was substantial volatility?

Mr. **Hardiman**. There was no doubt that there was substantial volatility.

Senator **Sasser**. Is there any relationship between volume and volatility and lack of program trading?

Mr. **Hardiman**. I don't know that I am knowledgeable enough to expound upon the relationship between program trading and volume and volatility. I would say that with increased volume, there is going to be increased volatility, and I think those two are related.

Now what the role of program trading is in that scenario, I'll have to leave to others like Mr. Melamed and John Phelan, who will testify here tomorrow.

Senator **Sasser**. Thank you; my time has expired.

The **Chairman**. Thank you, Senator Sasser.

I want to thank you very, very much, Mr. Hardiman, for your excellent testimony.

Before you leave, I just wanted to ask you if you will give the committee your specific recommendations on the Brady report. They had five recommendations in the conclusions, and if you would give that to us for the record, we would appreciate it.

Mr. **Hardiman**. We will, indeed. As I said, at this date, my board has not had a chance to formalize our positions on those views, but we will provide you with our specific comments on those.

[The following information was subsequently submitted for the record:]

—NASD

National Association of Securities Dealers, Inc.
1735 K Street, N.W.
Washington, D.C. 20006
(202) 728-8000

March 3, 1988

Honorable William Proxmire
Chairman
Committee on Banking, Housing
and Urban Affairs
United States Senate
Washington, D.C. 20510-6075

Dear Senator Proxmire:

When I testified before your Committee on February 4, 1988 I indicated that I would provide the Committee with the formal response of the NASD to the five primary recommendations of the Presidential Task Force on Market Mechanisms (the Brady Report). This letter provides responses to these recommendations in the order presented in the Brady Report.

1. One agency should coordinate the few, but critical, regulatory issues which have an impact across the related market segments and throughout the financial system.

The NASD does not believe that the designation of a single "super" regulatory agency to oversee intermarket issues is appropriate or necessary at this time. We recognize that greater coordination of regulatory responsibilities is essential to prevent disparities in the regulatory framework between underlying equity markets and derivative securities from accentuating price movements in equity markets. October 19 and 20 demonstrated how the market for index futures and options depend for their ultimate liquidity on the market for the underlying equity securities. We believe, however, that the appropriate response is not the creation of a single "super regulator," but rather a formal, direct effort by the SEC and the CFTC to coordinate and integrate regulatory programs for their respective markets, with particular emphasis on intermarket issues. This coordination and integration should encompass the regulatory programs of all self-regulatory organizations for both the securities and futures markets. Only if such efforts were unsuccessful within a reasonable time frame (e.g. six months) would we consider the vesting of authority in a single regulatory agency to be appropriate. Should such action be required, we feel it would be appropriate to concentrate regulatory authority for all equity related products in the SEC which already regulates the underlying equity and options markets.

2. Clearing systems should be unified across the marketplaces to reduce financial risk.

In theory, the concept of a "unified" clearing system has considerable merit. If the term contemplates a single system which will clear transactions for all markets, however, we do not believe this is a practical solution in the foreseeable future. The markets for equities, options, and futures each function differently and transactions are settled using different time frames and different market structures. For example, equity transactions generally settle on a five-day basis, while futures transactions settle the next day. In an equity transaction, another dealer, a specialist, or a customer would typically be the contra party to the transaction while in the options market, the Options Clearing Corporation is on the other side of each trade. Given the differences in the way the markets function, and in the underlying investment products, we believe it would be impractical to create a single clearing entity for all markets at this time.

The Brady Report's recommendation on clearing systems, however, could produce beneficial results in two respects. First, the clearing entities for all markets should share meaningful information on the credit exposure, operating condition and potential surveillance problems of firms trading in the various markets. Without timely, complete information on a firm's exposure in all markets, no one clearing entity can assess that firm's creditworthiness on an ongoing basis. A similar need for information may be faced by banks that extend credit to firms. If those banks had access, with each firm's prior agreement, to information on firms' exposure in all markets, the banks should be in a better position to respond to the needs of market participants. To the extent that the unification sought by the Brady Report will result in coordination among clearing entities for all markets and the sharing of credit, operating and surveillance information, we support that recommendation.

Secondly, a linkage of clearing facilities among futures markets should be considered. As noted in the Brady Report, the clearing facilities for equities have been linked since the mid 1970s. Clearing for all options transactions are handled by a single entity. A similar linkage or single processor for the futures markets would facilitate the linkage of clearing facilities for all markets and eventually could serve as the basis for unification.

3. Margins should be made consistent across marketplaces to control speculation and financial leverage.

The NASD supports the view that performance or maintenance margins on various types of securities should be set on a consistent basis in all markets. This does not mean that such margins should identical, but only that the amount of financial leverage available in the various markets should be consistent. The NASD believes that an important element of the coordination referenced in our response to the first Brady recommendation would be the oversight of margin performance or maintenance requirements by the appropriate regulatory agency and coordination between those agencies to insure that the margining requirements of the various markets do not give rise to disparate levels of risk and leverage among market segments. If that coordination is not achievable, the authority to establish performance or maintenance margin requirements for securities and their derivatives should be placed in one entity.

4. Circuit breaker mechanisms (such as price limits and coordinated trading halts) should be formulated and implemented to protect the market system.

The NASD does not agree that "circuit breaker" mechanisms are the appropriate response to market volatility. Indeed, mechanisms such as price limits or trading halts are more likely to accelerate upward or downward trends before and after their imposition. Rather, we believe that the most appropriate course of action during such periods is to keep the markets open and functioning at all times. The approach to correcting market inadequacies is not the establishment of artificial price limits which will halt trading when prices decline sharply or by halting all trading, but rather by correcting the problems of market access and the problems which restricted the ability of investors to execute trades. This is the goal of those changes that the NASD is implementing in its market. We believe that facilitating investor access to the markets and insuring that the markets continue to function will have a far more beneficial effect than the imposition of circuit breaker mechanisms. In addition, any consideration of introducing circuit breaker mechanisms should include a careful review of the potential impact of such changes on the liquidity needs of individuals, mutual funds, pension funds and many other intermediaries and investors that are dependent upon the markets for the liquidity of their portfolios.

Under extreme conditions in which there may be a human inability to cope or to facilitate the processing of overwhelming volume, consideration can and should be given to shortening the trading day for all markets as was done from October 23 to November 12.

5. Information systems should be established to monitor transactions and conditions in related markets.

The NASD agrees with the Brady Report's conclusion that the markets for equities, options, and financial futures while functioning differently are in fact all part of the same market. Accordingly, the NASD supports the establishment of improved intermarket information systems, both among the securities markets and between the securities and futures markets. As indicated in our testimony before the Committee, those responsible for operating the securities markets must plan, communicate and coordinate with each other on important intermarket issues. We believe that this coordination can be delivered within the existing regulatory framework. The existing Intermarket Surveillance Group (ISG) can provide this coordination on surveillance and compliance matters. Other similar groups can and should be established for financial, operational and technology matters which together with the ISG, could be placed under the umbrella of a broad inter-market self-regulatory coordinating policy group. The intermarket coordinating policy group would be charged with, among others, the responsibility to establish procedures to ensure direct communication among all markets and to provide the management of each major market and each regulatory agency with real time information on the conditions of all markets. Any decision to change trading hours or access to particular systems, for example, could then be coordinated among all securities markets.

In this regard, the NASD embraces the recommendation of the General Accounting Office that the relevant federal regulators, acting together with the marketplaces, should formulate contingency plans providing for coordinated decisionmaking and dissemination of information in the event of a future market crisis.

The NASD appreciates the opportunity to provide the Committee with these responses to the recommendations of the Brady Task Force and we wish to assure the Committee of our cooperation in carrying out the changes needed to respond appropriately to the October 19th market crisis.

Very truly yours,

Joseph R. Hardiman
President

CGA:L-Proxmire

The **Chairman**. Thank you very much.

Our next witness is Kenneth Leibler of the American Stock Exchange.

Senator **Riegle**. Mr. Chairman, I would like to just make a personal announcement, and that is that, unfortunately, I have to go to Michigan tonight and will not be here tomorrow morning, to be present at the funeral services of former Governor G. Mennen Williams. I very much wanted to be here tomorrow morning but will have to be present in Michigan, and when I will get back will do so, and if the hearings tomorrow are still in process, I will join them at that time.

The **Chairman**. Very well.

Mr. Leibler, we apologize to you for having detained you for so long. You're very patient. It is 25 minutes to 1, and you go right ahead, sir.

STATEMENT OF KENNETH R. LEIBLER, PRESIDENT, AMERICAN STOCK EXCHANGE, NEW YORK, NY, ACCOMPANIED BY RICHARD SCRIBNER, SENIOR VICE PRESIDENT, AMERICAN STOCK EXCHANGE

Mr. **Leibler**. Thank you. My name is Kenneth Leibler——

The **Chairman**. Will you introduce the gentleman next to you, Mr. Scribner.

Mr. **Leibler**. Sure. With me today is Richard Scribner, Amex senior executive vice president for legal and regulatory policy.

The **Chairman**. Thank you.

Mr. **Leibler**. I would like to thank this committee for the opportunity to appear today. We are clearly in the midst of what is probably the most intensive concentrated study of financial marketplaces ever conducted. Many of the recommendations that have been made so far, particularly those of the Brady Commission, have been extremely helpful. They have brought to the forefront pressing issues that have been resting fitfully in the back of the industry's collective mind during these past few years of market boom.

EXPERIENCE AT THE AMERICAN STOCK EXCHANGE

Before I discuss those issues, I would like to briefly indicate what our experience at the American Stock Exchange has been.

First, the vast majority of Amex securities traded continuously throughout the week of October 19. During that period our specialist market making system actively supported the market for equities, despite unprecedented selling pressure and price declines. Our order routing systems performed effectively and most orders were executed without undue delay. We average 2- to 3-minute delays on virtually all of our equity orders. Quotation and trading reporting systems were fully operational during the entire period.

This is not to slight the considerable problems that did emerge, but each and every one of those problems is being addressed with a sense of urgency and thoroughness.

The work that has been done to date by those who have undertaken to analyze these events has been fruitful. The issues are complex and not susceptible to easy answers. Any answers that were put forth, as you have seen today, will be controversial, but this should not dissuade us from moving ahead.

Of the many issues that have been raised, three broad themes recur in all of the studies as areas that call for immediate and careful assessment.

First, the risks inherent in the market appear to have increased dramatically. The causes are complex and elusive, but we must examine this issue from all perspectives. That means that we must understand the effect on markets of factors like institutionalization, program trading, portfolio insurance and index arbitrage. Only when we address the manifestations of excessive risk will we be able to restore confidence in the stability of our markets.

Second, it is clear that there must be consistent coordinated regulation of the securities and futures markets.

Distinctive features in the historic, even geographical development of our markets may have warranted autonomous regulation in the past, but they now pale before market forces that demand coordination. Contingency planning issues and the widely disparate cost of investments in futures, options, and equity products that are built into our clearing and margin systems are issues that must be addressed across markets.

Third, we cannot lose sight of the increase in globalization of our markets. The October crash was heard around the world. This interdependency must be better understood, so that we can address regulatory issues on a global basis. We must also be cognizant of the fact that the financial services industries in London, Tokyo, and elsewhere are large and growing. Any regulatory responses we make must avoid creating desirable foreign alternatives to our own markets.

As I have said, we support many of the findings in the Brady Commission report and the thrust of its major recommendations.

I would like to touch on a few especially important aspects of that report at this time.

A FEW BRADY COMMISSION RECOMMENDATIONS

The Brady Commission's recommendation that clearing and credit mechanisms among stocks, options and futures be unified, are well-taken and are worthy of immediate study, so are the report's recommendations that consistent margin requirements be imposed across all marketplaces.

The crash and subsequent volatility in the market has called into question the adequacy of margin requirements on derivative products. In our market, where we trade stock index options and individual stock options, we have closely watched margin adequacy. We acted quickly to raise stock index margins, light of the highly volatile market following October 19. We recognize the importance of margin as both a tool to cool speculation and to protect broker capital. The substantial margin increase we initiated was adopted by all of the option exchanges and at present levels of volatility, affords a high degree or protection.

While the more serious margin issues for our market concerned index options, we have also monitored the adequacy of margin requirements on individual stock options. Last October, as I noted, we raised margin requirements for index options. Currently, we are preparing a proposal to raise certain types of margin for equity options as well. This proposal is likely to include increases in the minimum equity required to write uncovered options as well as increased margins for other more sophisticated positions. Taken together, all of these increases will afford greater protection on the areas that we have identified as system vulnerabilities.

We believe a similar analysis must be undertaken for stock index futures to insure the consistency of margin across markets that the Brady Commission urges.

Another area that will be critical and the most difficult for the industry to wrestle with is that of regulatory consistency. It has become increasingly obvious that all markets have become linked to form, in essence, one vast market. This is perhaps the single most critical conclusion of the Brady report.

More than competitive one-upsmanship is at issue here, for it has become clear in recent months that regulatory differences in areas of intermarket concern can lead to disequilibrium and result in vulnerability, the scope of which our industry and regulators have only recently begun to focus on.

Although some of the issues we are discussing, they call for months more of careful analysis, others should be dealt with now. For example, the securities and futures markets, together with their regulators must work together to develop contingency systems and procedures for dealing with market emergencies.

The industry must also look at existing suitability and other customer protection issues to see where improvements are needed. We should evaluate whether existing procedures for communicating risk and trading strategies require improvement. This can do much to address customers' concerns.

Those of us who work in this field understand both the urgency and the complexity of the broad-ranging review of the markets that is not underway. We believe that you can't have a first-class economy with a second-class securities industry. We want to bring confidence back to our markets, and we want to bring the individual investor back to our markets. To achieve this, we know that we must cooperate fully with other self-regulatory organizations, Federal regulators and the Congress. And we know we must demonstrate a commitment to make changes.

I can assure you, Mr. Chairman, that the American Stock Exchange, and I believe our entire industry will provide the type of cooperation and commitment that is needed.

Thank you.

[The complete prepared statement of Mr. Kenneth R. Leibler follows:]

Testimony of Kenneth R. Leibler
President, American Stock Exchange, Inc.
Before the Senate Committee on
Banking, Housing, and Urban Affairs
February 4, 1988

Summary

We are in the midst of what is probably the most intensive, concentrated study of financial marketplaces ever conducted. The work that has been done to date to analyze these events, particularly the work of the Brady Commission, has been fruitful. Three broad themes recur in all of the studies as areas that call for immediate assessment.

First, market volatility and risk appear to have increased and their complex causes must be examined from all perspectives. Second, there must be consistent, coordinated regulation of the securities and futures markets. The widely disparate cost of investment in futures, options and equities products that are built into clearing and margin systems are issues that must be addressed across markets. Third, we must consider regulatory issues on a global basis to assure that we do not compromise the competitiveness of our domestic markets.

We are supportive of the key findings of the Brady Commission Report and the thrust of the major recommendations. Specifically, its recommendations that clearing and credit mechanisms among stocks, options and futures be unified are well-taken and worth immediate study. That is also true of the Report's recommendation that consistent margin requirements be imposed across all marketplaces. In late October, the Exchange increased margin for index options and we are preparing a proposal to increase certain margin requirements for equity options as well.

In addition, it is clear that there must be consistent, coordinated regulation of the securities and futures markets. Whatever distinctive features in the historic, even geographic, development of our markets may have warranted autonomous regulation in the past now pale before market forces that demand coordination.

Another major issue concerns the individual investor's access to our marketplaces. Our markets must be perceived as fair and accessible by smaller investors. Providing more balanced access may help avoid precipitous market declines and may provide an additional alternative to the introduction of circuit breakers or other mechanisms which shut down the markets.

The securities and futures markets, together with their regulators, must work together to develop contingency systems and procedures for dealing with market emergencies. Finally, and of key importance, we must look at existing suitability and other customer protection issues to see where improvements are needed.

Testimony of Kenneth R. Leibler
President, American Stock Exchange, Inc.
Before the Senate Committee on
Banking, Housing, and Urban Affairs
February 4, 1988

My name is Kenneth R. Leibler. I am the President of the American Stock Exchange. With me today is Richard O. Scribner, Amex Senior Executive Vice President, Legal and Regulatory Policy.

We are in the midst of what is probably the most intensive, concentrated study of financial marketplaces ever conducted. Even Congress' own investigations and hearings in the early 1930's and the SEC's studies of the 1960's were of much narrower scope: we now have a global context in which to view unprecedented market events. The securities industry and the government have amassed a wealth of data, analyses, observations and recommendations in a short period of time. There is urgency in these efforts because we need to understand the causes and long term effects of the crash. Many of the recommendations that have been made so far, particularly those of the Presidential Task Force on Market Mechanisms, have brought to the forefront and elucidated pressing issues that, perhaps, rested fitfully in the back of the industry's collective mind during these past few years of market boom.

Before I discuss those issues, I would like to briefly indicate what our experience at the American Stock Exchange was during the market crash. The Amex withstood the stress of those October days, and, indeed, has learned a great deal about what should be done in the future. During the week of October 19, unprecedented volume and volatility caused the Exchange to experience sporadic trading halts in some securities, delays in order executions, and some problems with the dissemination of quotation and transaction information. However, the vast majority of securities traded continuously during that period, and our specialist market-making system was in there supporting the market for equities despite unprecedented selling pressure and price declines. Our order routing systems performed effectively and without down-time under conditions which at times exceeded their designed capacity. Most orders were executed without undue delay once they were represented on the Exchange floor, and transaction reports were given to brokers or sent back electronically to member offices in a timely manner. Quotation and trade reporting systems were fully operational during the entire period. The large number of questioned trades during that week were resolved quickly through the hard work and long hours of Exchange brokers and clerical staff.

Like other marketplaces, we have received customer complaints concerning trading on our Exchange during that period. We are investigating all of them. We are examining

the performance of our specialists to assess the extent of their adherence to their market-making obligations and to determine whether halts in trading and delayed openings caused by extreme order imbalances were handled properly and did not extend longer than necessary. If warranted, we will take action against those who did not meet their obligations. We are engaged in upgrading and reevaluating our order routing and processing systems to assure that they are the most effective and efficient they can be. We also continue to carefully monitor the capital adequacy of our specialists, and we are taking a fresh look at the adequacy of current minimum capital requirements, and of capital reserves.

The work that has been done to date by those who have undertaken to analyze these events has been fruitful. The issues are complex and not susceptible to easy answers. Any answers that are put forward will be controversial, but this should not dissuade us from moving forward. Of the many issues that have been raised, three broad themes recur in all of the studies as areas that call for immediate and careful assessment.

First, the risks inherent in the market appear to have increased dramatically. This is evidenced by the extreme volatility which preceded and followed the crash itself. The causes are complex and elusive, but we must examine this issue from all perspectives. These include broad economic issues such as the causes of excessive speculation and attendant volatility, to narrower ones, such as the effect on markets of institutionalization, and strategies which serve large investors, such as program trading, portfolio insurance and index arbitrage. On the narrowest level, we who regulate the industry must be able to assess financial risk within our markets more quickly and accurately than we can today. Only when the manifestations of excessive risk are addressed on all levels will we be able to restore confidence in the stability of our markets.

Second, it is clear that there must be consistent, coordinated regulation of the securities and futures markets. Whatever distinctive features in the historic, even geographic, development of our markets may have warranted autonomous regulation in the past now pale before market forces that demand coordination. Contingency planning issues, and the widely disparate cost of investments in futures, options and equities products that are built into clearing and margin systems are issues that must be addressed across markets.

Third, we cannot lose sight of the increasing globalization of our markets. The focus on the implications of a global marketplace has been overshadowed by recent market events and scrutiny of our domestic marketplaces. The October crash, however, was heard 'round the world. The consequences of the interdependency of markets must be better understood so

that we can address regulatory issues on a global basis. We must also be cognizant of the fact that the financial services industries in London, Tokyo and elsewhere are large and growing, and that any regulatory responses we make must avoid the result of creating in foreign marketplaces desirable alternatives to our own.

The Report of the Presidential Task Force on Market Mechanisms, headed by Nicholas F. Brady, has evaluated these issues, among many others, and provides us with a document that will greatly assist the industry, the regulatory agencies, and Congress in their future deliberations and responses. The Report's reconstruction of the market events of the crash is one of the most comprehensive analyses of a major economic event ever to have been done. We concur with the Report's findings as to the causes of the crash, and as I have said, the Report's recommendations are both instructive and well-considered. While many other commentators will be addressing the Report in depth, we would like to touch on a few aspects of the Report which appear to us to be of particular significance.

The Brady Report's recommendations that clearing and credit mechanisms among stocks, options and futures be unified are well-taken and worth immediate study, as are the Report's recommendation that consistent margin requirements be imposed across all marketplaces. These are means by which we can at least better assess, if not reduce, risk in the system. The securities industry is moving now towards reducing the time for comparing equity trades. Next-day comparison should be achievable shortly, and, with some effort, same-day comparison could be achievable over the next few years. The shorter this time span, the more timely data will be available to firms and regulators, and the more quickly steps can be taken to address excessive financial risk. I would like to express our strong support for enlarging the current margin systems to include cross-margining where offsetting positions in different but economically equivalent products would be combined for margin purposes. A clear lesson from the crash is that separate margin requirements for such positions unnecessarily strains the liquidity of participants in more than one marketplace and causes inaccurate risk assessment by clearing corporations and exchanges. Although development of a cross-margin system may be a long and difficult process, I believe we must continue along the course outlined by the Options Clearing Corporation in its report to the Brady Commission. A critical feature of any fully developed cross-margin system should be that access is provided to all clearing corporations.

The crash and subsequent volatility in the market has called into question the adequacy of margin requirements on derivative products. In our market, where we trade stock index options and individual stock options, we have closely watched margin adequacy and acted quickly to raise stock index margins

in light of the highly volatile market following October 19. We recognize the importance of margin, as both a tool to cool speculation and to protect broker capital. The substantial margin increase we initiated was adopted by all the option exchanges and, at present levels of volatility, affords a high degree of protection.

While the most serious margin issues concern index options, we also have monitored the adequacy of margin requirements on individual stock options, and, after discussions with many member organizations and industry groups about their experiences and perceptions, we are preparing to recommend to the other exchanges that changes be made. These changes could include proposals to increase the minimum equity required to write uncovered options, and to raise margins for certain types of options positions. Taken together, these increases will afford greater protection in the areas which we have identified as system vulnerabilities. In addition, we, as well as the other options exchanges, will continue to monitor the effects of market volatility and will consider further action as conditions warrant.

We believe a similar analysis must be undertaken for stock index futures to insure the consistency of margins across markets that the Brady Commission urges.

Another area that will be critical, and the most difficult for the industry to wrestle with, is that of regulatory consistency. It has become increasingly obvious that all markets - primary and secondary, securities and commodities, on-exchange and off-exchange, domestic and foreign - have become linked to form in essence one vast market. This is perhaps the single most critical conclusion of the Brady Report. It is also becoming clearer that those who would perpetuate regulatory disparities between and among marketplaces should bear a heavy burden to justify, for example, lower margin requirements, or the absence of obligations imposed in other markets. More than competitive one-upsmanship is at issue here, for it has become clearer in recent months that regulatory differences in areas of intermarket concern can lead to disequilibrium and resultant vulnerability, the scope of which our industry and regulators have only recently begun to focus on.

We believe it should be an important goal of regulation of financial markets to place competitors in parity, and assure that no market segment operates at an advantage. Congress addressed this issue in the Securities Acts Amendments of 1975. At the time, this meant, among other things, permitting various market participants to develop as competitors to the American Stock Exchange and the New York Stock Exchange. Today this appears to be too narrow a focus - we need to take a new look at the regulatory pattern, given the growth of alternate markets and the increased role of institutional investors.

Disparities in regulation occur throughout all our markets, not only between competitors in the stock markets. But the result of disparity is the same. Participants without obligations may provide needed liquidity during good times, but their lack of obligation to the market translates into a liquidity crisis in bad times, as occurred in October. In the case of the exchanges, this meant the specialist became the market of last resort, a role no single group is capable of playing. In other markets, this can mean that liquidity vanishes.

In order to solve these problems we must, as the Brady Report recommends, fully revisit the regulatory scheme under which all financial markets operate. Congress in 1975 mandated a national market system for equities, which itself has never been fully realized. The ideals of a competitive, fully integrated, efficient national market need to be applied more comprehensively to all financial markets. Existing regulatory disparities among domestic securities markets, for example, may have direct effects on liquidity by imposing disproportionate burdens during volatile markets. The aim of providing comparable (not necessarily identical) regulation is to minimize the possibility that events in one marketplace can have devastating impact on another marketplace, yet be subject to no regulatory control by that market or its federal regulator. It is for this reason that a workable means of regulating intermarket issues needs to be in place. We also need to give thought to reaching agreements with foreign jurisdictions - to help minimize regulatory differences among the world's major marketplaces for their mutual benefit.

A final major issue concerns the individual investor's access to our marketplaces. In part, this is an issue of fair play. Our markets must be perceived as fair and accessible by smaller investors. During the October crisis, Amex order routing systems were able to service smaller retail orders well, and I believe the smaller investor generally was not shut out or disadvantaged by large institutional orders. Nevertheless, institutional trading increasingly dominates our markets. We ignore the concerns of small investors at our peril. Their continued participation is crucial to our markets, and to the capital raising mechanism. Indeed, Congress itself expressed its concern with the nature of institutional participation in the markets in 1975, when it added Section 13(f) to the Exchange Act, thereby instructing the SEC to accumulate data which would allow for informed assessment of the influence of institutional investment on the markets. If we focus on ways to equalize access to our markets, we may thereby improve market liquidity and reduce the possibility that a massive influx of institutional orders will be dumped into our trading systems at once. If it is possible that liquidity is a limited resource, and that, in strained market situations, demand may outstrip supply, we need to think about whether there is some way to allocate liquidity more

evenly among market participants. The Brady Report cites the activities of a relatively small number of market players, engaging in program trading, portfolio insurance strategies, and risk arbitrage, as having seized much of the available market liquidity on October 19 and 20. Providing more balanced access may help avoid precipitous market declines and may provide an additional alternative to the introduction of circuit breakers or other mechanisms which merely shut down the markets.

All of these major initiatives need coordinated federal regulation, and the Brady Commission is absolutely correct to be critical of the existing regulatory pattern. It is unlikely that comparable regulation among segments of what is indeed one market will develop unless the SEC and CFTC speak with one voice on the key intermarket aspects of regulation. This calls, at a minimum, for congressionally-mandated regulatory coordination of financial product regulation.

In a much shorter time frame, there are several issues to be tackled now. The securities and futures markets, together with their regulators, must work together to develop contingency systems and procedures for dealing with market emergencies. We agree with the General Accounting Office's recommendation to Congress that intermarket contingency plans should be developed quickly, and we believe the self-regulatory organizations and federal agencies have great incentive to do so.

The industry, the self-regulatory organizations, the SEC and the CFTC also need to look at existing suitability and other customer protection issues to see where improvements are needed. We should estimate whether existing procedures for communicating risk and trading strategies require improvement. This can do much to address customers' concerns.

Finally, I would urge again that any and all structural and regulatory initiatives be thoroughly reviewed with global competition in mind. The development of the international markets is a complex and quickly changing arena in itself, and one in which this Congress has shown great interest.

Although much progress has already been made, we must accelerate our efforts in finding a means of enhancing cooperation and coordination among markets, regulators and governments. Only in this fashion can needed domestic reform take place while minimizing the competitive risks to our position as the preeminent financial marketplace in the world.

The **Chairman**. Well, thank you, Mr. Leibler for a superb statement. That is one of the best statements we have had. It is very forthcoming and specific, and it is a great help to the committee. We congratulate you on that.

SPECIALIST PERFORMANCE

Let me ask you about a delicate matter in which I understand an Amex specialist was involved. You're probably very familiar with it. According to the Washington Post story this morning, specialist performance in October 1987 was very questionable, with respect to Washington Post stock. The Amex specialist in the Washington Post stock was questioned, and trading in that stock is reported to have been suspended for 2½ days.

That news is particularly startling because that particular stock, belongs to the newspaper that, of course, is dominant in the Washington area. If there is any newspaper that is well read by the Members of Congress and the administration, it is certainly the Post. And if trading was closed down for 2½ days, why did the specialist not set a price in open trading for this long period of time?

Mr. **Leibler**. Well, first, let me say, Senator, that we do have specific instances. We think we have isolated them, and they are relatively limited, in terms of specialist performance problems. During the week of the 19th the vast majority of our securities were trading. Over 98 percent of them were trading and fully accessible throughout that period.

The Washington Post is one that is currently under review by the Exchange's performance committee. There were a number of factors that occurred during that 2-day time period. The stock is a high-priced stock. They had announced major earnings increases. Our committee is in the process now of looking at the extenuating circumstances, in light of the amount of time the stock was closed, and will make a determination. In making a determination, the performance committee has a wide range of powers. They could reallocate the stock perhaps to another specialist. They could prevent that specialist from being eligible for additional allocations or there could be other forms of censure.

The **Chairman**. That was the longest period of suspension of stock trading for any stock? Did any have longer than 2½ days? That seems like a very long time.

Mr. **Leibler**. That was certainly the longest in our marketplace. And I would say that part of the suspension, though, in all fairness, was related to news that was pending on the stock. And that would be a fairly normal procedure. At least 1 day of that 2½-day period was due to the pending earnings announcement, and that was, in essence, a regulatory halt. So the entire 2½ days was not due simply to market conditions.

The **Chairman**. I understand that on the Amex issuers have a voice in selecting their specialists. The Wall Street Journal reported that the Amex, its specialist, and the Washington Post together decided that, because of an order imbalance, the market would not be open on October 19. Is that accurate?

Mr. **Leibler**. I am certain that the company was advised of the process that we used and the fact that the stock was not trading, but the company would not have, under normal circumstances or even under abnormal circumstances, a vote or voice in the decision that the Exchange would make concerning the suspension of trading.

The CHAIRMAN. Mr. Leibler, you support coordinating the regulation of securities and futures. What is your opinion about granting the SEC or the Fed—and which one would you prefer—sole authority for policing futures?

Mr. LEIBLER. Well, I think the first step, as apparently the Federal regulators have mentioned yesterday, and other SRO's have stated, would be for the industry and the existing structure to see whether or not we could agree on implementing many of the important recommendations in the Brady report. We think that should be tried initially. If that fails, it is our view that the intermarket concerns are serious enough that the Congress ought to make clear to the participants in that process, that if that fails, a unified regulatory system would be implemented. It could be either, either the Fed or the SEC, we don't have a strong feeling as to which—I think there are arguments on both sides for either of those agencies.

But I think it is important that Congress make clear that if the existing regulatory structure and the exchanges cannot agree on a mechanism to deal with these intermarket issues, that further action will be taken. Clearly, one choice would be the selection of a unified regulator.

The CHAIRMAN. What would be a reasonable time, in your judgment, to allow for achieving such agreement?

Mr. LEIBLER. I think a 3- to 6-month period would be reasonable. For instance, if one just looks at the SEC study, it is literally the size of the Manhattan telephone book, and I think it could take weeks for the individual markets just to digest what is in the SEC study versus the CFTC, Brady, the GAO, as well as individual inquiries.

So I think you are talking about a period of months, perhaps 3 to 6 months.

POST-EXECUTION REPORTING

The CHAIRMAN. During the crash, the computer order system, known as Post-Execution Reporting, was swamped, yet rather than taking full advantage of automation, many specialists abandoned automatic order processing altogether, as I understand, in favor of manual processing. As a result, according to the SEC report, the number of orders turned around in 3 minutes plummeted from an average of 88 percent to about 68 percent. In fact, we were told yesterday that the Boston Exchange wasn't held up at all, because they are completely manually operated. They are completely manually operated and weren't held up. Maybe that was not the reason, but that seemed interesting.

Now I understand the Amex believes its computer system worked well, that you have no plans to improve this system to handle greater volume.

Can you explain this?

Mr. **Leibler**. The last part of that statement, I would say, is not entirely accurate. We have made significant investments, and we continue to make significant investments, particularly this year in improving both the quality and the capacity of our systems. In fact, our budget for 1988 in the area of systems is up about 30 percent. We spent over $18 million in 1987 and plan to spend about $24.5 million in 1988.

I think the SEC report indicated that our systems had the least delay when compared to either the over-the-counter market or the New York Stock Exchange. And I think one of the reasons for that is that the "front end" of our system was able to deliver orders into the marketplace with very mimimal dalays.

One of the concerns that was pointed out by these reports which you refer to is that fact that our automated touch screen capability, which we think is state of the art, has room for six orders to appear at one time. The specialist, with a touch of a finger, can execute those individual orders. We had periods during the 19th and 20th, when orders were coming in at such a fast rate, that the six-order capability had difficulty keeping up. For example, at times there might be 10 or 15 orders coming in, and rather than have those orders cued in the system, many specialists made the determination that they would be better off turning that system off, have all the orders print, to be executed manually.

So, yes, there were instances when we did not fully rely on the systems, but we think, by and large, that enabled us to perform more effectively, but even those system delays, Senator, were very short. They were not of a protracted period at all, and the fact that they could not use the touch screen did not affect the market's ability to respond in a reasonable and prompt fashion to fulfill all of those orders.

The **Chairman**. Thank you.

Thank you, gentlemen, very much. We very much appreciate your testimony.

Mr. **Leibler**. Thank you.

The **Chairman**. Our final witness this morning is Karsten Mahlmann. Mr. Mahlmann is the chairman of the Chicago Board of Trade.

Mr. Mahlmann, you take the prize as the most patient man we have had in a long time. I again apologize for bringing you on so late. We save the best for last.

Mr. **Mahlmann**. Last, but not least, Senator.

The **Chairman**. Go right ahead, sir. Will you introduce Mr. Donovan?

STATEMENT OF KARSTEN MAHLMANN, CHAIRMAN, CHICAGO BOARD OF TRADE, CHICAGO, IL, ACCOMPANIED BY THOMAS R. DONOVAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER

Mr. **Mahlmann**. Mr. Donovan is at my left. He is president and CEO of the Chicago Board of Trade.

The **Chairman**. Very good.

Mr. **Mahlmann**. Chairman Proxmire, and there are no members of the committee right now, thank you for permitting us to appear before you today to present our views on the serious issues which occupy these hearings.

We represent the oldest and largest futures exchange in the world, where today nearly half of all of U.S. futures contracts are traded. While our major market stock index futures contract represents only 2 percent of our Exchange's volume, we, nonetheless, would like to offer our views on some of the difficult questions confronting this committee.

The Chicago Board of Trade bond futures provides necessary price insurance to the forty primary dealers who underwrite the national debt. Throughout the market crisis, the flight to quality greatly increased volume and pressure on our Treasury bond contract, nevertheless, the Chicago Board of Trade opened every contract on time every day. We called no trading halts during any trading session. We had no delayed quotes. All member firms stayed in compliance with financial requirements; all margin obligations were met.

VIEWS OF THE BRADY REPORT

Today we will address the Presidential Task Force's recommendations one by one. Senator Brady emphasizes that in reality there is only one market. We completely concur, although we must remember that that one market is global in dimension.

Senator Brady wants to use financial markets to build a safer house. Again, we absolutely agree. The securities and futures industries can together build that safer house. We have the incentive and the know-how to get it done, to make it sound, to make it cost-effective and to make it stand for years as an American-led global industry.

The Brady points. I have enumerated five that I would like to address today.

INFORMATION SYSTEMS

No. 1, information systems. To start, the foundation of the house must be better information. Throughout its report, the Brady task force stresses the need for improved coordination between markets. The Chicago Board of Trade and the Chicago Mercantile Exchange have jointly developed the best trade data system in the world. Our CTR system allows us to reconstruct who traded what, with whom, at what price and in what quantity in every given contract to the nearest minute, and it is available to us, as well as our regulator, the following morning. It is an unrivaled audit trail system. Senator Brady told us how impressed he was when he saw CTR in action. The Brady task force states, "The stock exchanges have no system which details trades and trading times by customer."

In the spirit of cooperation, on February 2, we wrote John Phelan, chairman of the New York Stock Exchange, offering to share this copyrighted trade data system with the Stock Exchange. We also this morning have offered the same to Mr. Leibler of the American Stock Exchange. The adoption of a computerized trade reconstruction system by the stock exchanges will significantly raise the level of those exchanges' audit trail, so that vital information can flow two ways to facilitate intermarket coordination and expeditiously detect possible violations such as intermarket front-running.

USE OF CIRCUIT BREAKERS

No. 2, the use of circuit breakers. Futures markets already have proven circuit breakers in place in the form of price limits. Once price limits are reached, an automatic trading suspension is imposed, which is known in advance to all market participants. Such limits are now in place on all Chicago Board of Trade contracts. They were adopted by our Board of Directors for our MMI contract immediately following the stock market decline.

Securities markets do not have price limits. Instead, trading halts are called at the discretion of a specialist. Such trading halts should be formalized and must be known in advance by the public in order to be effective and fair. Once such procedures have been adopted, the stock and futures markets can coordinate the use and levels of price limits and trading halts in stock and stock index futures trading.

UNIFIED CLEARING SYSTEMS

No. 3, unified clearing systems. Unified clearing systems does not and should not mean a single clearing mechanism. In the first place, stock and stock index futures markets could not be cleared through a single entity since stock index futures settle on a same-day basis while stock markets take 5 business days to settle. Moreover, concentrating the risk of all positions in one clearing entity would increase, not decrease the chances of a breakdown of the financial system.

Unified clearing should mean improved sharing of pay and collect information among related markets and respective lenders to market participants. The Chicago Board of Trade has spearheaded a successful effort to adopt it in the futures industry. Currently, the Chicago Board of Trade and the Chicago Mercantile Exchange, representing 80 percent of the total U.S. futures volume, share daily net pay and collect information; all other futures exchanges, plus the Options Clearing Corp., will be on line in a matter of months. More recently, the National Securities Clearing Corp., has been asked to participate in the this information sharing. Thus, critical detailed data on the daily flow of funds is presently shared by most of the intermarket clearing entities and could soon be shared by all.

The Board of Trade further recommends that Federal Reserve wire hours should be expanded and that all bank and financial exchange holidays should be coordinated. These changes, in conjunction with those already in place and in progress can go far towards reinforcing clearing and credit systems and centralizing accountability.

INTERMARKET COORDINATION

No. 4, intermarket coordination. The Brady task force suggests that a third agency, possibly the Federal Reserve, should coordinate the activities of the SEC and the CFTC on matters of intermarket concern. Chairman Greenspan seriously questions this recommendation and we agree. But we also agree with Senator Brady, that greater coordination between market regulators is necessary. The CFTC currently has the authority to deal with all futures markets emergencies, including closing the markets and raising margin levels. To the extent the SEC does not have such authority over securities markets, its lack of such emergency powers should be addressed.

While we believe that a great deal of communication and coordination already exists between the CFTC and SEC, a formalization of this procedure should be adopted. In our judgment, such a system of coordination would be more effective than the creation of a third superagency structure.

CHANGES IN FUTURES MARGINS

No. 5, changes in futures margins. This is probably the most misunderstood issue before you. The Brady report, however, puts it into context. First, the report confirms that futures margins and stock margins serve different purposes and functions. In Chairman Greenspan's words before this committee, futures margins are a performance bond, while stock margins are an extension of credit. In the futures markets, there is no extension of credit; you pay as you go. Consistent with these purposes and the different functions served by both markets, futures margins must be paid daily; stock margins must be paid within 7 business days.

Based on these recognized differences, no one is recommending that futures and stock margins be identical. Rather, the Brady report recommends that "futures margins should be consistent with effective stock margins for professional market participants such as broker-dealers."

You have heard testimony that the popular media perception of 50 percent stock margins is a myth. Instead, the Brady report found that professionals can invest in stocks on a 20-percent to 25-percent margin. In comparison to stock margins of 20 to 25 percent, Major Market Index stock index futures margins are now 15 percent. Considering that futures margin must be paid daily while stock margins are paid weekly, futures margins already are relatively consistent with stock margins.

To the extent that futures margins are lower than securities margins, the difference lies in the fact that stock margins are the equivalent of a downpayment on a house while futures margins are the equivalent of the insurance premium which one pays for the policy that protects against the loss of the house.

If people were forced to pay insurance premiums equal to half the value of their homes, they simply would refuse to buy home insurance. Similarly, if futures margins were arbitrarily increased, pension funds and other institutional investors would simply not use stock index futures or at least not in the United States to manage their risk, thereby leaving their participants, the hundreds of thousands of pensioners, vulnerable to substantial loss from volatile markets like those that we had in October.

The Board of Trade adjusted its margins over 200 times in 1987, in order to insure that both cost efficiency and financial integrity were maintained. Congress has correctly concluded, again and again, that only exchanges have the necessary expertise and flexibility to maintain that fine balance.

FOREIGN COMPETITION

No. 6, last, but not least, foreign competition. Were Congress now to take action to alter our proven system of margin-setting or otherwise increase the regulatory costs of doing business on our exchange floors, the beneficiary of such action would be our foreign competition, not the American public.

During the week of October 19 London markets profited when our bond contract hit its limit price. Bond futures business could not be transacted in Chicago, so London volume soared by over 800 percent of normal. Subsequent to the Brady report announcement in the United States, the Japanese Ministry of Finance has significantly expanded the market for stock index trading in Tokyo.

Like the automobile industry in earlier times, futures markets are a uniquely American success story that is now being copied and xeroxed in London and Tokyo and worldwide.

Today, we have the best futures markets in the world—reputed for both their cost efficiency and market integrity. Let us carefully preserve that delicate balance in the face of our less regulated foreign competition, as we approach any proposals for change. And let us not deceive ourselves into thinking that our foreign competitors will not create an equally quality product at the lowest possible price.

In closing, gentlemen, I would simply urge you that you not make the U.S. futures industry the car industry of 1988.

Mr. Chairman, my remarks have been a little bit longer than the green light went. I thank you for letting us testify.

The **CHAIRMAN**. Well, thank you, Mr. Mahlmann. They were not long, they were fine, and we very much appreciate it. I think your statement is one of the best that we have had, and we are very grateful to you sir for it.

Mr. **MAHLMANN**. Mr. Chairman, also I ask to present a written copy.

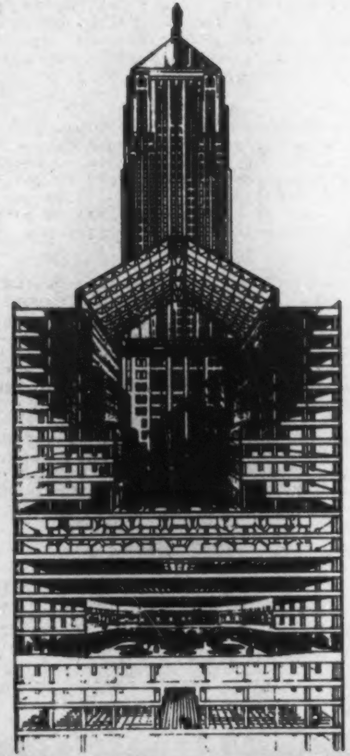
The **CHAIRMAN**. That will be filed and kept in the record.

Mr. **MAHLMANN**. Thank you.

[The complete prepared statement of Mr. Karsten Mahlmann follows:]

Supplemental Written Submission Before the Senate Committee on Banking, Housing, and Urban Affairs

February 4, 1988



Chicago Board of Trade

WRITTEN TESTIMONY OF THE BOARD OF TRADE OF THE CITY OF CHICAGO BEFORE THE SENATE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

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I. INTRODUCTION

The Board of Trade of the City of Chicago ("Board of Trade" or "CBOT") wishes to thank Chairman Proxmire and the members of the Committee for extending the invitation to appear before the Committee to share with you our thoughts regarding the market events of last October, what we can all learn from those events, and what should be done as a result.

The market events of October 1987 already have generated articles, commentaries, studies and reports. There can be no question that these events are worthy of this degree of attention. However, much misinformation has been generated as a result and some vital information glossed over in the process. The Chicago Board of Trade would like to focus these remarks directly on the most difficult and challenging questions so that the Committee will be fully informed.

We will discuss in detail: (1) the performance of the markets, particularly the Board of Trade's markets; (2) the existence of a global marketplace and particularly the critical challenge to U.S. financial markets which is posed by foreign competition; (3) the timeliness and accuracy of market data; (4) clearing and credit mechanisms; and (5) perhaps the area where the most misinformation presently exists, the differences between futures and securities margins.

The Chicago Board of Trade is the world's oldest and largest futures exchange. Founded in 1848 and subject to Federal legislation and oversight since 1923, the Board of Trade began as an agricultural marketplace. Using standardized futures contracts, agricultural market participants hedged the risk of their cash market positions and discovered the most accurate commodity price levels through open outcry, auction market bidding in one competitive, central marketplace. By the 1970's, we knew these same principles could be successfully applied to financial products as well. In 1975, we began trading financial futures contracts.

Today, nearly half of the futures and futures options contracts traded in the United States are transacted on the floor of the Chicago Board of Trade. This includes not only traditional grain futures, but the two largest U.S. futures exchange contracts - U.S. Treasury Bond futures and options on U.S. Treasury Bond futures. Our Treasury Bond contracts provide an indispensable link in facilitating the sale of U.S. government debt in the most efficient, least expensive manner possible. The value of U.S. government securities transactions traded at the Board of Trade in 1987 was the equivalent of 9.5 trillion dollars. Thus, in the markets of October, 1987, when investors shifted from U.S. equity securities markets to the more secure U.S. government securities markets, the Board of Trade played a critical and indispensable role.

The Board of Trade does trade a stock index futures contract, the MMI or Major Market Index under license from the American Stock Exchange (which trades the same index as a securities option.) The MMI futures contract represents approximately two percent of the Exchange's total volume and ten percent of the volume of U.S. stock index futures trading. Our MMI ranks third behind the S&P 500 futures contract traded at the Chicago Mercantile Exchange and the NYSE Composite stock index futures contract traded at the New York Futures Exchange, the wholly-owned subsidiary of the New York Stock Exchange.

Thus, while not a leading participant in the area of stock index futures trading, the focus of this Committee's inquiry, the Chicago Board of Trade nonetheless is an integral part of the U.S. financial marketplace and uniquely positioned to comment on the broad, national policy issues inherent in this Committee's inquiry.

II. WORLD FINANCIAL MARKETS - OCTOBER, 1987

Any meaningful review of the market events of October, 1987 must begin with an understanding of the fundamental economic forces at work in the world's financial markets. An unprecedented bull market had pushed stock prices to inflated levels in major markets around the world. Also, key changes in the size and speed of major world market participants were already translating fundamental economic signals into more abrupt and volatile stock market movements.

The events of October 1987 occurred in a world financial market dominated by a small number of very large institutions with the capacity to move massive amounts of investment dollars in or out of any stock market at unprecedented speed. American firms are not alone in their ability to do this. Firms such as Nomura, Daiwa, Yamaichi, and Nikko rival and exceed Salomon, Merrill Lynch, Drexel and Goldman Sachs in size and capitalization. In the U.S., foreign purchases of long term U.S. government securities grew more than ten-fold in the last five years.[1] Purchases of Japanese investors alone constituted about half of these foreign purchases.[2] Total foreign purchases of U.S. stocks have nearly quadrupled over this period.[3] With this increase in foreign participation in our markets, a fundamental economic change such as a decline in the dollar can spur a sudden massive shift in investments by a relatively small number of institutions.

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[1] From $97.9 billion in 1983 to an estimated $1,196.2 billion in 1987. Treasury Bulletin.

U.S. markets and world markets are extremely competitive, leading to rapid movements of large funds for a small cost or return advantage. A major reason foreign capital flows to the U.S. has been the efficiency of our domestic markets. The U.S. has one of the few markets large enough to handle the enormous amounts of capital which global financial market participants have to invest. The most attractive U.S. markets, for example government securities and stocks, are large and liquid. Futures markets play a vital role in ensuring this efficiency and liquidity, particularly in world grain markets and U.S. Treasury bond markets, a fact repeatedly recognized by those who have studied futures markets. For example, the 1984 study of the futures markets conducted by the Federal Reserve Board, the Commodity Futures Trading Commission ("CFTC") and the Securities and Exchange Commission ("SEC") concluded:

> "From the perspective of the economy as a whole, then, it would appear that futures and options make possible greater output per unit of productive resources, just as in the case of any cost saving technological innovation."[4]

Academic studies have reaffirmed the value of the markets; for example:

> "The net effect of dealers' use of (stock index and other financial) futures markets is to lower both the variance of interest rates and the cost of capital to firms. In this manner,

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[2] Japanese purchases in 1987 are estimated to be $553.5 billion. Treasury Bulletin.

[3] From $69.6 billion in 1983 to an estimated $254.3 billion in 1987. Treasury Bulletin.

[4] A Study of the Effects on the Economy of Trading in Futures and Options, Board of Governors of the Federal Reserve System, Commodity Futures Trading Commission, Securities and Exchange Commission (1984), p. VI-12.

> futures markets are conducive to a higher rate of capital formation."[5]

Futures markets are an integral part of the U.S. financial markets and contribute significantly to their efficiency. Their contribution is well understood by foreign leaders seeking to develop their own futures markets. Former Japanese Prime Minister Nakasone, for example, in a speech to the Japanese Parliament called futures markets a "....fundamental strength of capitalist economies.." and urged aggressive policies promoting futures markets in Japan.[6] Japan has indeed moved aggressively. Since October, the Ministry of Finance has issued recommendations for new legislation which will result in stock index futures trading in Japan along U.S. lines, accelerated introduction of options trading, and an entire new financial futures market which will trade U.S. government Treasury Bond futures. The Japanese government has clearly followed the course charted by Mr. Nakasone.

III. MARKET PERFORMANCE AT THE CHICAGO BOARD OF TRADE

While the stock market events of October affected the Chicago Board of Trade as they did all financial markets, the CBOT futures markets continued to function extremely well. Trading volume of Treasury bond futures and options set records as investors shifted from stocks to government securities, and bond prices increased sharply. Portfolio managers relied heavily on futures markets for 3fficient portfolio reallocation; Chicago Board of Trade Treasury bond futures and options markets were in great demand during the week of October 19. Total Treasury bond futures and options trading volume during the week was 3.1 million contracts, representing approximately $300 billion of Treasury bonds.

The U.S. Treasury bond futures contract has become an indispensable component of the long-term U.S. capital market and a vital tool for primary government security dealers in underwriting U.S. government debt. In just over ten years, the Treasury bond futures market at the Chicago Board of Trade has come to epitomize the value of financial futures to the U.S. economy. Among a virtually limitless list of market uses, depository institutions use Treasury bond futures to adjust the risk exposure of their asset/liability mix, primary government securities dealers offset the risk of their inventory with Treasury bond futures, and portfolio managers hedge their income-earning assets with Treasury bond futures.

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[5] "Futures Markets and Capital Formation," Jerome L. Stein (Brown University) in Futures Markets: Their Economic Role Anne E. Peck, (Ed.), American Enterprise Institute for Public Policy Research (1985), p. 118.

[6] Remarks to the Budget Committee of the Diet; November 6, 1986. Journal of Commerce, 11/7/86.

The role of the Treasury bond futures market in the issuance of the U.S. government debt is one of the most important aspects of this market. Primary dealers underwriting U.S. government debt are major users of the futures market to manage their exposure to interest rate fluctuation. The availability of such an efficient hedging tool has made it easier for the government to sell its debt which, in turn, has lowered borrowing costs. Another obvious measure of the market's contribution to the U.S. is the eagerness with which foreign firms seek to emulate the success of Treasury bond futures as they establish their own financial futures markets.[7]

Industry observers single out an event in December 1982 as one particularly indicative of the importance of Treasury bond futures even five years ago. The Treasury Department had scheduled an auction of Treasury securities in late December. When it learned that the CBOT financial futures markets would be closing early for the Christmas holiday, it rescheduled the auction. Efficient issuance of the debt was not assured with the CBOT futures markets closed.

Although the benefits of Treasury bond futures are felt most directly in reduced transaction costs in the financial sector, the consequences for economic welfare extend beyond that narrow focus. The increased liquidity and risk reduction facilities available to portfolio managers and other investors is reflected in a reduced cost of capital to business firms of all sizes. The ultimate benefit, therefore, is translated into greater capital formation for the economy as a whole.

A. The "open outcry" system

The Chicago Board of Trade could not have achieved this level of market liquidity without the efficiencies derived through its open outcry auction system. Although the trading systems at the futures exchanges may appear disorganized and even chaotic to the untrained

observer, futures trading is a highly-developed art which provides the critical, central meeting point for market information and incoming orders from all segments of the worldwide trading community. This ability to enter orders from all over the world to all sides of the trading pit to a large number of market participants and market makers generates liquidity in the futures markets.

In 1986, the Board of Trade commissioned a study entitled "The Determinants of Market Liquidity" by Dr. Sanford Grossman of Princeton University and Dr. Merton Miller of the University of Chicago (hereinafter, "Miller and Grossman"). According to Miller and Grossman, "markets are liquid when they provide immediacy for large order executions at low costs." In the futures markets, commercial market participants usually have an established cash market position and are looking to immediately transfer the price risk of holding that cash market position to other market participants or market makers before market fluctuations can result in losses on those positions.

> Miller and Grossman state that "the great variety we see in market making arrangements has emerged in response to differences in the costs and benefits of immediacy in different market settings." When the demand for immediacy is as high as it is in futures trading, "an open outcry system with many competing market makers is likely to be the most efficient response. The larger the number of market makers, the smaller is the share of the risk of an incoming order that any single market maker must bear. Hence, the larger is the size of an order that can be executed immediately without adverse price consequences."

Miller and Grossman further conclude that:

> "Where the advantages of immediacy are smaller than they are for trading futures contracts, quite different kinds of market making arrangements may be appropriate... When the flow of orders and the demand for immediacy is not enough to support the continuous presence of many competing market makers, the granting of a monopoly franchise may induce a market maker to remain available as in the specialist system of the New York Stock Exchange. Specialist markets can often provide price stability for small orders, but a single specialist is unlikely to be able to supply sufficient liquidity on the trading floor for large trades to be executed immediately without adverse price effects." When a large order imbalance arises, specialist systems avoid price fluctuation by calling for trading halts, thereby sacrificing immediacy.

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[7] Futures markets for domestic government securities currently exist in the United Kingdom, France, Japan, Australia, Canada and the Netherlands. Futures markets in domestic government securities are being studied in Switzerland, Germany, Hong Kong, Norway and Sweden.

In summary, because there are a great number of market makers in a futures pit competing with each other for incoming orders, the very nature of that competition dictates that the incoming order will be executed immediately at the fairest price. Because there are a great number of market makers, multiple incoming orders can be executed simultaneously at competitive market prices.

In contrast, because the specialist trading system relies upon a single firm or individual, an incoming order can only be executed under the auspices of the specialist and at a price determined by the specialist. Those with competing bids or offers for the incoming order are at a disadvantage to the specialist. Similarly, because each order must be routed through a single specialist, orders must be executed sequentially, rather than simultaneously as in the futures markets. The very nature of this system sacrifices immediacy. Moreover, in many fast-moving market situations, a single specialist may be unable to cope with the pace of trading and choose instead to halt trading. This process was likely a contributing factor in the October 19th market collapse.

B. Superior Market Surveillance

One of the fundamental reasons that the Chicago Board of Trade's markets perform so well is the quality and immediate availability of market information. A vivid example of the quality of information is the Exchange's audit trail. Historical experience has taught the CBOT that precise and timely market information is critical to maintaining an orderly market, investigating market conditions and maintaining the integrity of the market.

The CBOT is able to obtain market information on a daily basis due to its clearing system which includes daily matching of trades and settlement of financial obligations. The CBOT currently matches transactions twice per day and is in the process of moving towards on-line clearing which eventually will provide market trading information throughout the course of a trading day. Because all trades are currently submitted to the Exchange's clearing organization on a daily basis, the Exchange is able to have trading information available for review the next morning by staff members of its Office of Investigations and Audits.

One of the primary information databases generated by the Board of Trade is its Computerized Trade Reconstruction System (CTR). The CTR System reconstructs daily trading activity for all market participants and determines the execution time of each transaction. The CTR System gathers the quantity, price, order or trading card number, customer, firm, and broker; opposite customer, firm and broker; and half-hour time bracket. Each time a price change occurs in the marketplace, the new price, along with the exact time it was

executed to the nearest second, is electronically recorded in the Time and Sales Journal by independent Exchange employees. The CTR system matches the trade data input into the Exchange's clearing system with the Time and Sales Journal information to calculate the exact time each trade was executed.

Additionally, the trading data accumulated is automatically analyzed on a daily basis for possible violations of the CBOT's rules and regulations. The CTR Plus System permits investigators to reconstruct trading activity chronologically, by individual trader, clearing firm or, if necessary, by customer.

The CTR Plus System also reviews for trading ahead, sometimes referred to as frontrunning. The System will identify any broker who traded ahead of a customer's order for his own account at a better price than his customer. In addition, the System will identify any clearing firm that traded for its proprietary account ahead of and at a better price than a customer.

A number of other programs are available through the CTR Plus System. These include:

- accommodation trading, which identifies participants who do not offer their trades competitively to the market;

- crossed orders, which indicates that a broker or firm traded one customer's order against another and did not offer orders competitively by open outcry to the marketplace;

- taking the other side of a customer's order, which indicates a broker or firm who traded against a customer's order for his own account; and

- wash trading, which identifies when two traders are frequently trading with one another at identical prices.

In addition, other forms of critical market information are available on a daily basis to the CBOT. For example, the Board of Trade maintains a large trader reporting system. Every market participant with an open position in excess of a certain specified number must report his position to the Exchange on a daily basis. This information allows the Exchange to quickly construct the composition of all major participants in its marketplace.

Additionally, member firm financial statements are submitted to the Exchange on a regular basis. Financial statement information is immediately input into the Exchange's computer system which checks the statement for clerical accuracy and immediately identifies any firm that does not comply with minimum capital or segregation requirements or experiences unusual financial trends.

Moreover, because of the Exchange's daily settlement procedure, it is able to identify the total obligations (pays) or gains (collects) from every clearing member for its customer and proprietary accounts on a daily basis. This information is currently combined with the Chicago Mercantile Exchange's pay and collect data, resulting in coverage of nearly 80% of the futures industry. Very shortly, all futures exchanges will be consolidated on a single daily pay/collect information system. In addition, the Options Clearing Corporation, which clears securities options, has agreed to share daily settlement information with the futures exchanges. Furthermore, the National Securities Clearing Corporation, which clears transactions for the securities industry, has been approached with respect to sharing relevant market data.

If a member firm has large pays in relations to its capital, the Office of Investigations and Audits will immediately determine the causes for such obligations, thereby enabling the Office of Investigations and Audits to determine on a daily basis the approximate financial condition of each clearing member firm.

Finally, by using the SAFE System, Simulated Analysis of Financial Exposure, the financial position and market positions of all clearing members are reviewed on a daily basis. The SAFE System which is composed of more than 120 different visual screens, simulates market movements over various ranges and degrees of volatility to project the potential financial exposure of all member firms.

As the Brady Task Force report has concluded, the ability to reconstruct market trading activity is critical. The events of October demonstrate the need for all markets to have similar capability to that which currently exists in the futures market. It has become increasingly clear that the securities industry does not have the same quality of and immediate access to information such as is available to the futures markets. As a result, it appears to be difficult to detect possible instances of trading abuses in the securities markets, let alone provide for the detection of possible abuses across securities and futures markets.

The inability to have access to such market information is a critical deficiency in the securities market which must be improved before investor confidence in the integrity of the securities trading system can be assured.

C. Financial Integrity

During the week of October 19, no clearing member of the Chicago Board of Trade failed to meet any of its obligations to the Exchange. In fact, throughout the history of the Board of Trade

Clearing Corporation, no customer has lost any funds due to a default of a Board of Trade Clearing Corporation member. During the week of October 19, $5.5 billion in variation margin was paid to the Board of Trade Clearing Corporation by clearing members and immediately paid out by the Board of Trade Clearing Corporation.

The Chicago Board of Trade's Office of Investigations and Audits intensified its monitoring of the financial condition of member firms on Friday, October 16. Those monitoring programs continued during the week of the 19th and subsequent thereto, insuring that all member firms were able to meet compliance with minimum capital and segregation requirements.

D. Communications

Throughout the week of October 19, Board of Trade officials were in close communication with other exchanges, federal regulators and White House officials. On October 19, CBOT officials were in New York preparing for a Board of Directors meeting to be held in New York the next day. (Board meetings are normally held in Chicago. Ironically, the October 20 meeting was scheduled to be held in New York to facilitate an exchange of views and information between the New York and Chicago financial communities.) With the apparent stock market decline, the CBOT's President and Chairman were in constant communication with Exchange officials in Chicago regarding market conditions. In addition, contacts were made with the Chicago Mercantile Exchange, regarding activity in their marketplace. Additionally, Exchange officials conversed with senior White House officials regarding market conditions. Those officials encouraged the Board of Trade to remain open if at all possible.

On the evening of October 19, all Directors and officers returned to Chicago from the regularly-scheduled Board of Directors meeting in New York to better monitor the affairs of the Exchange. On October 20, numerous contacts were made throughout the day with other futures exchanges, the Chicago Board Options Exchange, the New York Stock Exchange and the Commodity Futures Trading Commission.

Members of the Office of Investigations and Audits were in close communication throughout the week of the 19th with the CFTC, the Chicago Mercantile Exchange, other futures exchanges, the Chicago Board Options Exchange, the New York Stock Exchange and the American Stock Exchange.

E. CBOT Remained Open

In this period, and on October 20 in particular, many stock and stock index markets formally closed or were informally closed due to the paralysis of key market players. The Board of Trade, however, made the decision to remain open so as to fulfill its Congressionally-mandated functions of providing a market for the transfer of risk and a market in which free-market prices are discovered. This latter function proved of critical importance on October 20 when the Board of Trade's MMI stock index contract provided the sole line of communication for the financial community to express its confidence in the U.S. economy. Without the information communicated by this market, the U.S. financial system would have had to function in an already confused marketplace with even more informational uncertainty.

F. Price Limits

On October 20, an automatic trading suspension was imposed on the Board of Trade's U.S. Treasury Bond contract due to wide price movement in the contract. Futures trading suspensions are imposed by exchange rules to limit daily price fluctuations, i.e., price limits. Price limits have been a standard feature of futures contracts for over 50 years. Daily price limits are established by futures exchanges at levels that permit unconstrained trading within the normal price range of a commodity while providing for an automatic suspension if a market exhibits extraordinary price movement.

Price limits are a type of "circuit breaker" that was recommended by the Presidential Task Force on Market Mechanisms ("Brady") report. The CBOT proposed such limits for its stock index contracts in November, 1987, and they were recently put into effect on a permanent basis immediately following CFTC approval. Price limits expand the period required for major price moves. In so doing, they have two major benefits. First, they provide greater financial management capability to futures brokerage concerns by increasing the time available to collect funds and, thereby, enhance the financial integrity of the exchange. Second, price limits reduce the likelihood of temporary mispricing that may result from overreaction to new information by market participants.

Unfortunately, price limits also impose costs. Such limits artificially constrain market prices. Trade suspension means that futures prices will not reflect "true" economic value once price limits are reached. Furthermore, trade suspension means that individuals may be "locked" in or out of futures positions while the underlying market is freely operating. For example, if stock index futures markets had price limits in place on October 19th, futures trading would have been suspended for much of the decline in market prices. Lastly, price limits may direct business overseas. For example, on October 20, when CBOT Treasury Bond futures reached limit and therefore effectively closed trading, volume in London's competing market increased by 800 percent.

During the October market break, the NYSE also imposed a circuit breaker in the form of the discretionary trading halts that were called by specialists. Unfortunately, these discretionary halts create excessive uncertainty for market participants as to the basis for such a halt. This uncertainty can breed market panic as was witnessed upon the reopening of the Hong Kong Stock Exchange after its self-imposed trading halt and less dramatically in the U.S. market's reaction to what was interpreted as SEC Chairman Ruder's suggestion that NYSE trading might have to be suspended.

To work effectively, circuit breakers must be applied consistently in all markets. To forestall market panic, circuit breakers must be automatic and nondiscretionary. They should be imposed according to pre-set market rules rather than subjective, discretionary actions by a few individuals such as specialists that may have an economic interest in such action. The Chicago Board of Trade and the Chicago Mercantile Exchange have adopted price limits for their stock index contracts set at 10 to 12 percent of current market value.[8] The recent suggestions that the New York Stock Exchange is contemplating daily price fluctuation limits is certainly welcome news. Although the New York Stock Exchange proposal is still preliminary, hopefully the New York Stock Exchange will follow the lead of the futures exchanges and set limits at similarly responsible levels.

The consistent imposition of circuit breakers across markets will avoid the costs and uncertainties imposed by inconsistent closure of the various parts of this interrelated market. Although circuit breakers will still impose costs through inefficiency in market pricing mechanisms, the benefits from an expanded time frame for major market price moves and increased financial integrity of exchange transactions may outweigh this cost.

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[8] The New York Futures Exchange, the New York Stock Exchange's futures subsidiary, and the Kansas City Board of Trade have set the limits on their stock index futures contracts 50% higher or about 17 to 18 percent of market value.

Table 1

THE TEN MOST ACTIVELY TRADED CONTRACTS ON FUTURES EXCHANGES; 1985, 1986, 1987

RANK	1987	1986	1985
1.	Chicago Board of Trade TREASURY BOND FUTURES	Chicago Board of Trade TREASURY BOND FUTURES	Chicago Board of Trade TREASURY BOND FUTURES
2.	Chicago Board of Trade TREASURY BOND OPTIONS	Chicago Board of Trade TREASURY BOND OPTIONS	Chicago Mercantile Exchange STANDARD & POORS 500 FUTURES
3.	Chicago Mercantile Exchange EURODOLLAR FUTURES	Chicago Mercantile Exchange STANDARD & POORS 500 FUTURES	Chicago Board of Trade TREASURY BOND OPTIONS
4.	Chicago Mercantile Exchange STANDARD & POORS 500 FUTURES	Chicago Mercantile Exchange EURODOLLAR FUTURES	Chicago Mercantile Exchange EURODOLLAR FUTURES
5.	Tokyo Stock Exchange JAPANESE GOVERNMENT BOND FUTURES	Tokyo Stock Exchange JAPANESE GOVERNMENT BOND FUTURES	New York Commodity Exchange 100 OUNCE GOLD
6.	New York Mercantile Exchange CRUDE OIL FUTURES	New York Commodity Exchange 100 OUNCE GOLD	Chicago Board of Trade SOYBEAN FUTURES
7.	Paris Financial Futures Exchange FRENCH GOVERNMENT BOND FUTURES	New York Mercantile Exchange CRUDE OIL FUTURES	Chicago Mercantile Exchange DEUTSCHEMARK FUTURES
8.	New York Commodity Exchange 100 OUNCE GOLD	Chicago Mercantile Exchange DEUTSCHEMARK FUTURES	Chicago Board of Trade CORN FUTURES
9.	Chicago Board of Trade SOYBEAN FUTURES	Chicago Board of Trade CORN FUTURES	New York Commodity Exchange 5000 OUNCE SILVER FUTURES
10.	Chicago Board of Trade CORN FUTURES	Chicago Board of Trade SOYBEAN FUTURES	Chicago Mercantile Exchange SWISS FRANC FUTURES
(11.)	(London International Financial Futures Exchange LONG-TERM GILT FUTURES)		

IV. THE CHALLENGE OF FOREIGN COMPETITION

Foreign competition, particularly from Japan, has been felt in numerous U.S. industries. Foreign competition for the U.S. futures industry increased markedly in recent years. Futures exchanges have proliferated overseas and products offered by these exchanges have become more diverse as the benefits of futures markets have become better understood. In 1987, contracts at exchanges in Tokyo, London and Paris were in the listing of the top 11 futures contracts trading worldwide. In 1985, there were no foreign contracts on the list (see Table 1).

The rate of growth of foreign markets has been explosive. Foreign futures trading volume has grown more than twice as fast as U.S. futures volume for the last two years (see Table 2). Volume of government bond futures and options trading on overseas exchanges grew 100 percent from 1986 to 1987, and grew 1300% percent between 1985 and 1987 (see Table 3). Treasury bond futures and options volume at the Chicago Board of Trade, while dynamic, grew at a much slower pace--27 percent and 70 percent from 1986 to 1987 and 1985 to 1987, respectively. Volume of stock index futures and options trading at foreign exchanges exploded in 1987 (see Table 4) while stock index futures and options trading at domestic futures exchanges fell slightly.

The conclusion is inescapable: foreign futures exchanges are challenging U.S. dominance.

An event during the week of October 19, 1987 graphically illustrates how rapidly foreign competition can move to take business from U.S. exchanges. On October 20, prices in the Chicago Board of Trade's Treasury bond futures market locked limit up. (Locked limit up means that the price reached the upper limit of the permissible daily trading range, as defined by the futures contract: trading outside that pre-determined range is prohibited within that day.) Less than 35,000 Treasury bond contracts were traded during the day session that day, as compared to an average of nearly 320,000 per day during the entire month of October (see Table 5). Despite the well-known preference for the safeguards and market integrity provided by the Chicago Board of Trade and the financial integrity provided by the margin system of the Board of Trade Clearing Corporation ("BOTCC"), participants in the Treasury bond market sought risk management services elsewhere. Many sought these services in the Treasury bond futures market at the London International Financial Futures Exchange (LIFFE) cleared by the International Commodities Clearing House (ICCH). Volume in LIFFE's Treasury bond futures contract, open only since June 1984, exploded to over 47,000 contracts on October 20, nearly eight times its average daily volume of approximately 6,200 contracts for the first

Table 2

ANNUAL GROWTH RATE

DOMESTIC AND FOREIGN FUTURES EXCHANGES

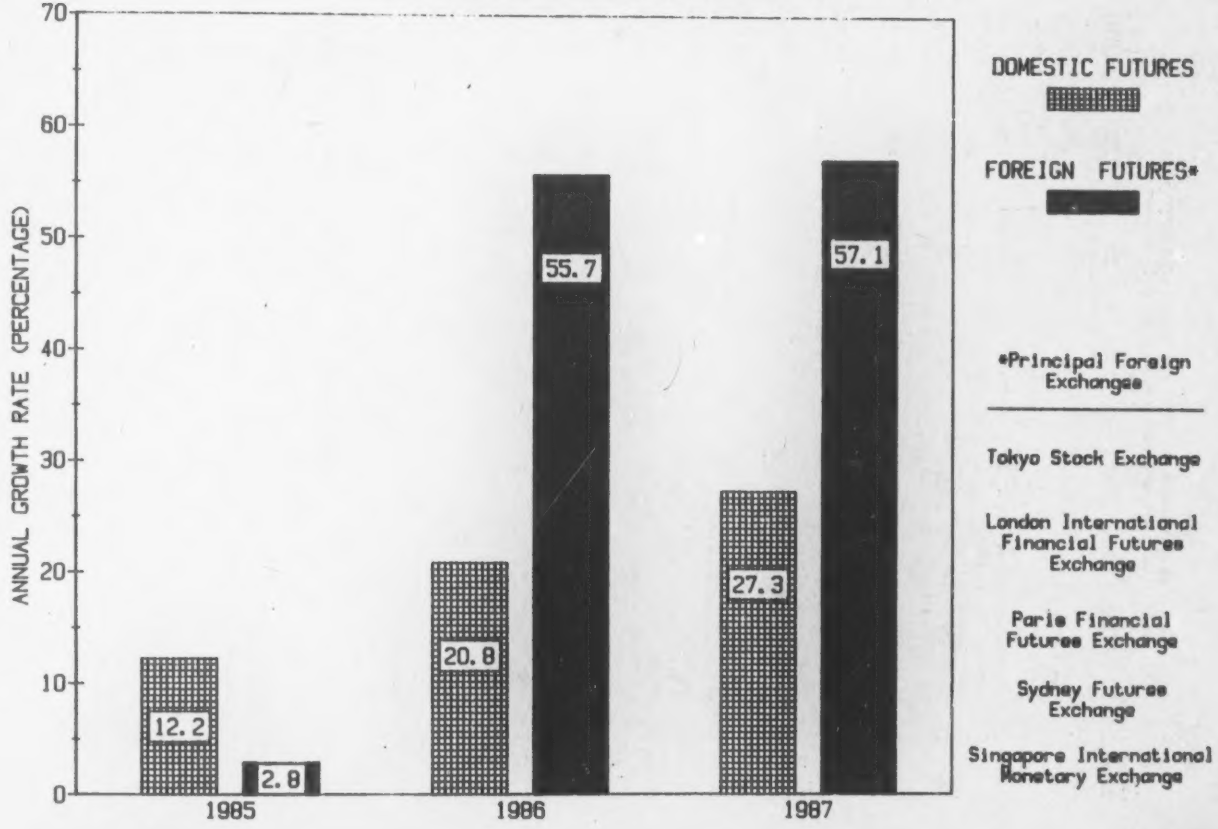

Table 3

ANNUAL VOLUME OF GOVERNMENT BOND FUTURES AND OPTIONS CONTRACTS
TRADING ON FOREIGN FUTURES EXCHANGES; 1982-1987

EXCHANGE*	CONTRACT	1982	1983	1984	1985	1986	1987
				(Contracts)			
EOE	Dutch Guilder Bond Options	-	-	-	1,117,630	866,765	629,026
LIFFE	Long-Term Gilt Futures	28,091	526,215	777,722	687,216	2,655,209	7,035,729
	Long-Term Gilt Options	-	-	-	-	283,158	1,044,991
	Short-Term Gilt Futures	-	-	-	43,514	61,691	284
	U.S. T-Bond Futures	-	-	168,142	631,039	1,575,053	1,487,434
	U.S. T-Bond Options	-	-	-	-	53,741	55,593
ME	Canadian Bond Options	2,239	62,013	147,122	240,821	285,618	372,260
NZFM	5 Year Government Bond Futures	-	-	-	-	81,423	176,165
MATIF	French Government Bond Futures	-	-	-	-	1,663,453	11,904,167
SFE	2 Year Government Bond Futures	-	-	8,710	600	0	0
	10 Year Government Bond Futures	-	-	1,917	242,202	1,431,595	2,063,903
	10 Year Government Bond Options	-	-	-	6,249	183,197	373,416
	U.S. T-Bond Futures	-	-	-	-	7,262	2,176
SIMEX	U.S. T-Bond Futures	-	-	-	-	32,287	14,151
TFE	Long-Term Canadian Bond Futures	-	-	30,115	25,224	0	0
	Long-Term Canadian Bond II Futures	-	-	-	9,036	2,315	1
	Mid-Term Canadian Bond Options (8 3/4%)	-	-	-	-	244	184
	Long-Term Canadian Bond Options (11 3/4%)	-	-	-	6,309	39,389	5,663
	Long-Term Canadian Bond Options (9%)	-	-	-	-	3,833	19,532
TSE	Yen Bond Futures	-	-	-	452,553	10,502,717	18,261,332
TOTAL:		30,330	588,228	1,133,728	3,462,473	19,728,950	43,446,087

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* EOE: European Options Exchange; LIFFE: London International Financial Futures Exchange; ME: Montreal Stock Exchange; NZFM: New Zealand Futures Market; MATIF: Paris Financial Futures Exchange; SFE: Sidney Futures Exchange; SIMEX: Singapore International Monetary Exchange; TFE: Toronto Futures Exchange; TSE: Tokyo Stock Exchange.

Table 4

ANNUAL VOLUME OF STOCK INDEX FUTURES AND OPTIONS CONTRACTS TRADING ON FOREIGN FUTURES EXCHANGES; 1982-1987

EXCHANGE*	CONTRACT	1982	1983	1984	1985	1986	1987
			(Contracts)				
AFFM	Australian Leaders Portfolio	-	-	-	-	1,067	36
BFE	Blue Chip Index	-	-	-	-	135,287	91,544
	IBV Index	-	-	-	-	-	250,723
EOE	EOE Share Index Options	-	-	-	-	-	411,901
	Major Market Index Options	-	-	-	-	-	39,539
HKFE	Hang Seng Index	-	-	-	-	825,279	3,595,182
INTEX	Financial News Composite Index	-	-	-	-	2,488	24,963
LIFFE	FT-SE 100	-	-	73,590	89,308	123,961	469,780
	FT-SE 100 Options	-	-	-	-	2,945	9,111
NZFE	Barclay's Share Price Index	-	-	-	-	-	119,038
OSE	OSF 50	-	-	-	-	-	200,470
OM	Stock Index Options	-	-	-	-	16,098	6,724,679
SFE	All Ordinaries Share Price Index	-	180,014	237,011	284,148	464,475	624,699
	All Ordinaries Share Price Index Options	-	-	-	3,720	27,091	137,078
SIMEX	Nikkei 225	-	-	-	-	33,593	363,439
SOFFEX	Stock Index Options	-	-	-	-	-	1,843,362
TFE	TSE 300 Composite Index	-	-	18,014	25,050	51,491	14,327
	TSE 35 Index	-	-	-	-	-	238,296
TOTAL:		0	180,014	328,615	402,226	1,683,775	15,158,167

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* AFFM: Australian Financial Futures Market; BFE: Brazil Futures Exchange; EOE: European Options Exchange; HKFE: Hong Kong Futures Exchange; INTEX: International Futures Exchange (Bermuda); LIFFE: London International Financial Futures Exchange; NZFE: New Zealand Financial Futures Exchange; OSE: Osaka Securities Exchange; OM: Options Mesklarna (Stockholm, Sweden) SFE: Sydney Futures Exchange; SIMEX: Singapore International Monetary Exchange; SOFFEX: Swiss Options and Futures Exchange; TFE: Toronto Futures Exchange.

ten months of 1987 (Table 5). Uncertainty about ICCH-cleared foreign markets stemming from the reported losses at the Hong Kong exchanges (in which ICCH holds an interest), lack of faith in foreign clearing entities and preference for the historical margin performance of the Board of Trade Clearing Corporation probably kept LIFFE's volume from rising even higher.

In the cash Treasury bond market, traders reported that bid-ask spreads widened four-fold on that day due to the absence of the competitive discipline provided by Chicago Board of Trade Treasury bond futures. This substantially reduced such traders' abilities to trade in the cash market efficiently.

The experience of October 20 demonstrates the vulnerability of domestic futures markets to international competition, even Chicago Board of Trade Treasury bond futures, by far the largest futures contract in the world. It shows the willingness of participants to take their business elsewhere to competitive substitutes. Market users are quick to move to competitive markets overseas if our futures cannot immediately provide cheap and efficient transaction and risk management services.

In spite of the Brady Task Force mandate to maintain competiveness of U.S. financial markets, numerous proposals have been circulated to alter the manner in which futures are traded. Meanwhile, in Japan, the Ministry of Finance announced in January, proposals for a new financial futures market and for a general broadening of Japanese participation in financial futures markets.[9] The proposal sets the stage for the introduction of U.S. Treasury bond futures at the Tokyo Stock Exchange (TSE) later this year and for additional stock index futures trading in Japan this spring. It is interesting to note that volume of the only stock index futures contract currently trading in Japan, the Osaka Stock Futures 50, has increased five-fold since September. Rather than fleeing the stock index futures market, the Japanese have rushed to it. They have discovered the benefits of stock index, and other, futures markets, and are moving quickly to develop these markets domestically. (See Table 6.)

To fully appreciate the Japanese threat to Treasury bond futures trading in the U.S., it is useful to examine the growth in Japanese purchases of longer term U.S. government securities in the last five

Table 5

FOREIGN COMPETITION

Treasury Bond Futures Volume; Chicago Board of Trade
and London International Financial Futures Exchange
October 1, 1987 to October 30, 1987

Date	Chicago Board of Trade Night Session	Chicago Board of Trade Day Session	Chicago Board of Trade Total	LIFFE Total
10/01/87	23,466	261,753	285,219	5,970
10/02/87	9,047	368,448	377,495	995
10/05/87	10,963	267,009	277,972	4,336
10/06/87	7,623	244,259	251,882	7,890
10/07/87	10,522	362,278	372,800	8,525
10/08/87	10,626	442,189	452,815	6,891
10/09/87	15,363	308,742	324,105	7,775
10/12/87*	10,370	84,586	94,956	3,391
10/13/87	14,887	278,275	293,162	6,317
10/14/87	12,100	511,021	523,121	14,482
10/15/87	19,270	640,217	659,487	12,538
10/16/87	21,967	365,532	387,499	2,461
10/19/87	28,892	483,949	512,841	13,503
10/20/87**	28,269	34,487	62,756	47,082
10/21/87	44,552	311,180	355,732	15,955
10/22/87	13,933	366,911	380,844	12,465
10/23/87	28,266	323,253	351,519	16,079
10/26/87	19,203	272,409	291,612	12,529
10/27/87	20,937	280,655	301,592	13,398
10/28/87	15,270	337,029	352,299	10,900
10/29/87	15,542	224,911	240,453	9,537
10/30/87	17,400	220,040	237,440	7,352
Average Daily (Year-To-Date)	12,385	286,505	297,121	6,186

* Columbus Day; Banks and some financial institutions closed.
** Day session locked limit up.

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[9] Japanese Finance Minister Kenichi Miyazawa on January 25, 1988 before the Japanese Parliament stated "Regarding the expansion of futures markets, we plan to promote a stock futures market, create a new financial futures market and de-regulate overseas trading of financial futures."

years. In 1983 the Japanese bought $9.4 billion of these securities. In 1984, the amount doubled to $18.6 billion. In 1985 and 1986, Japanese purchases rose to $95.2 billion and then $329.1 billion, respectively. Last year, in only the first nine months, Japanese purchases of longer term U.S. government securities were over $400 billion. The Japanese, by pursuing plans to launch a U.S. Treasury bond futures contract at the TSE, perhaps as early as year-end, are making it possible for those purchases to be hedged in Japan, rather than the U.S.

While the foreign threat to U.S. futures markets has grown, the threat to our securities markets has grown as well. Two years ago, there were ten U.S. stocks trading on the Tokyo Stock Exchange; now there are 50. In London, there are 200 U.S. stocks listed. Foreign purchases of U.S. stocks grew from $80.5 billion in 1985 to $146.0 billion in 1986 to $190.7 billion in only the first nine months of 1987. Foreigners find our stocks attractive yet they also appear to want to trade them on their own soil.

U.S. futures markets are highly efficient and are still the envy of the world. If, however, they become cost inefficient, foreign futures markets are poised to take business away. The U.S. has lost leadership in the automotive, steel and electronics industries; we could lose our leadership in the global futures industry as well.

V. RESPONSES TO PROPOSALS FOR REGULATORY CHANGE

A. Introduction

Despite the flawless performance of the Board of Trade's markets, the events of October have caused every exchange, including the Chicago Board of Trade, to review and reevaluate market mechanisms. Since October 19, the Board of Trade's President and Chairman have been meeting on a frequent basis with representatives of the futures industry and the securities industry as well as legislators regarding the interaction of the securities and futures marketplaces. In particular, a meeting was held with senior officials of the New York Stock Exchange in an attempt to formulate a consensus on the future direction of possible market harmonization.

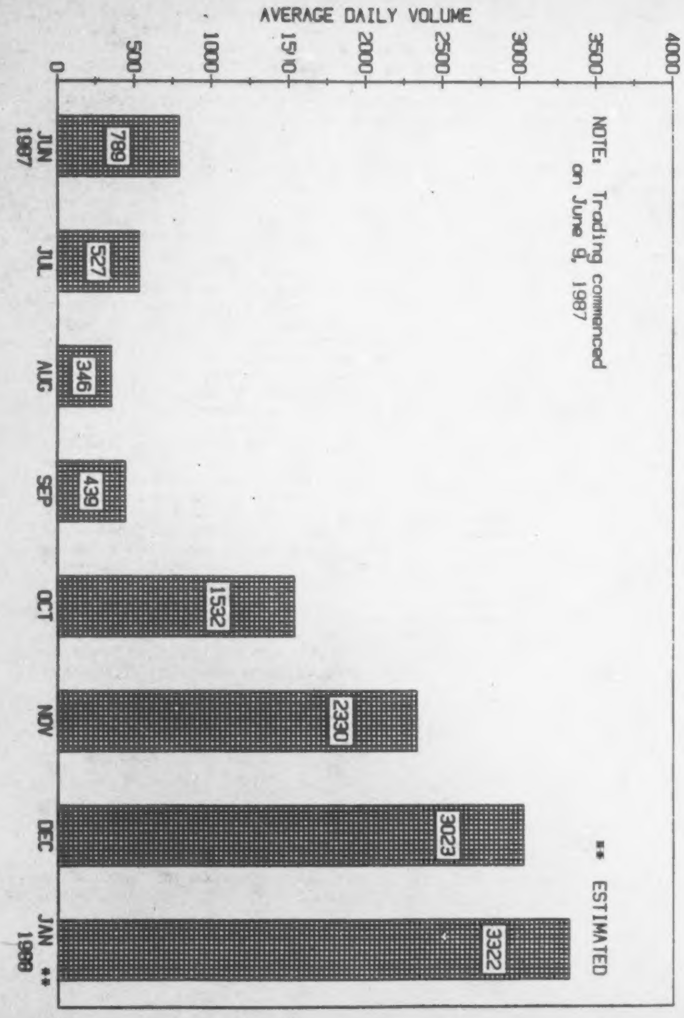
As a result of these meetings and subsequent deliberation, the Board of Trade has reached several conclusions regarding regulatory changes which will best equip all markets to address volatile conditions such as those which arose last October.

B. Price Limits

The Board of Trade has imposed price limits on its Major Market stock index contract. Those maximum daily fluctuation limits are equal to

Table 6

OSAKA SECURITIES EXCHANGE - OSF 50 STOCK FUTURES CONTRACT
AVERAGE DAILY VOLUME - JUNE, 1987 - JANUARY, 1988



40 points, or approximately 10% of the current value of the contract. The imposition of such limits would make it impossible for the futures markets to move in excess of those limits within one trading day. If the market closes at its limit for two consecutive days, the limits would be expanded by 150%.

C. Margins

The markets of October have generated much discussion - and much misinformation - concerning the subject of margins.

Initially, futures margins and securities margins have in common only a name: futures margins contain two components: a performance bond paid immediately and a variation payment adjusted to the market daily; securities margins are the permissible level of financing on the purchase of stock due up to seven days after the purchase or even later with extensions. Futures margins are akin to home insurance premiums while securities margins are analogous to the amount of the house's purchase price being financed by a mortgage. If homeowners were required by law to pay insurance premiums equivalent to half or even twenty-five percent of the value of their house, no one would insure. Similarly, if futures margins are raised to arbitrarily high levels, market users (such as pension funds, banks and grain elevators) either will not insure their risk or will use foreign futures markets to do so.

Moreover, the prevalent understanding that securities margins are 50% and futures margins are 10% is simply erroneous. Securities market margins for professional investors generally are 20-25% and for certain professionals can have an effective rate of 0% at times. Futures margins for positions held any length of time may vary from 3-50% or more. Additionally, there is no evidence that increased margins reduce the adverse effects of excessive speculation. Futures markets have a mechanism for addressing such effects; Congressionally-mandated speculative position limits. Thus, increasing futures margins to dampen excess speculation and/or to achieve parity with securities professional investors would be a step premised on totally faulty assumptions. Moreover, it would increase the expense of using U.S. futures markets resulting in unhedged positions and/or the export of domestic financial markets to foreign markets eager to capture U.S. business and unburdened by misguided regulation.

The difference between stock and futures margins reflects the fundamentally different purposes of the two types of markets. Stock markets are investment and speculative markets that provide forums for buying and selling stocks. In contrast, futures markets are risk-transfer markets that permit the shifting of price risk through futures contracts. The functional difference between these markets is akin to that between the purchase of a home and the purchase of home insurance. When purchasing a home, a buyer will typically acquire home insurance to protect against a decline in the home value due to physical loss. Insurance transfers the risk of home ownership to the insuring company. Similarly, futures markets provide a vehicle to transfer the price risk associated with the ownership of securities and other commodities to other individuals. Futures contracts can offset declines in the market value of securities held in a portfolio.

A credit margin on a stock purchase is a down-payment, a percentage of the actual purchase price, made by the purchaser to the party who loaned him the remaining funds to purchase the stock. The lender requires this down-payment to offset any losses that might occur if the purchaser defaults on the loan and the stock is sold as collateral. Upon the down-payment of the credit margin, full ownership rights in the purchased stocks are transferred to the purchaser.

Margins are required for futures as a performance bond. They do not involve any extension of credit. Furthermore, no collateral exists in the futures markets to secure a margin deposit. Margins must be deposited by both buyers and sellers when entering the futures markets. Most importantly, futures positions are settled on a daily basis by distributing losses or gains due to price changes. The payments flow through the clearinghouse immediately, thereby insuring liquidity in the system. If funds deposited as performance bond margin have been reduced as a result of adverse price moves, additional performance bond margin payments are required. Deficits are not allowed to accrue; losses of clearing members must be paid off daily. Thus, futures performance bond margins ensure that cash is available daily to settle each day's market obligations in full.

To simply look at an initial futures margin level of 10-12%, which merely permits a position to be established, and compare that to a 50% margin in securities markets, which permits actual ownership of stock by a nonprofessional, public purchaser, ignores the daily settlement of futures contracts and is totally misleading.

It is also misleading because securities market professional investors do not pay 50% margins. Under the Federal Reserve Board's Regulation T, only public customer margin down payments are at the 50% level. What is required of other market participants is not always readily clear. Broker dealers, market-makers, odd-lot dealers and specialists - the securities market professional investors - are required to post "good faith" margin, generally 20 to 25% under NYSE Rule 431. It is our understanding that this requirement can be reduced in several ways (including sales to other broker dealers and election of alternative capital structures) to levels of 15% or even lower.

Moreover, margin in equity securities is not due until settlement or seven business days after purchase (up to 28 days is possible with extensions) in contrast to futures margins where initial margin is due to the clearinghouse immediately, and variation margin adjusted daily thereafter as long as the position remains open. As an illustration of the net effect of variation margin, under market conditions as they prevailed between October 14 to 20, a position established by any futures market participant in our MMI stock index contract on October 14 would have been margined at more than the 50% level (greater than securities non-professional purchasers) by day four, October 20, one day before settlement of the securities purchase and three days before securities margin payment (at whatever level) was due. (See Table 7)

To keep performance risk low, futures markets have developed efficient systems for the rapid collection of margins. The foundation of these systems is a third party clearing organization, the "clearinghouse", which assures the financial integrity of each trade. The clearinghouse requires that all futures trades be submitted for clearing through its member clearing firms. Parties to a futures contract are responsible for making performance bond margin payments to clearing members. These clearing members are in turn responsible for making performance bond margin payments to the clearinghouse based on their customers' and their own positions. Membership in the clearinghouse is limited to firms that meet stringent financial requirements. The financial survival of the clearing members as well as their legal obligation to the clearinghouse creates strong incentives to assure the prompt collection of margin payments by the clearing firm.

The daily settlement process of futures demands speed and flexibility in the setting of performance bond margins so that the overall goal of minimizing risk, including default risk, can be met. For this reason, performance bond margins are set by the exchanges through committees which are able to assess and respond quickly to changing market conditions. These committees, comprised of members with considerable experience and expertise, can meet at a moment's notice to examine the adequacy of performance bond margin levels in light of current market volatility and can change such levels to reflect daily price changes. For example, over two hundred performance bond margin changes were made in 1987 at the Chicago Board of Trade.

In contrast to futures, stock transactions are not designed to minimize risk; therefore, rapid margin collection has not been the central concern. Consequently, stock trades are settled over a five day period and margin payments are generally not due until settlement or seven days. Stock credit margin levels, which have been set by Federal regulatory authorities, are seldom adjusted and show little response to changing market conditions. For example, initial stock credit margin levels have not changed since 1974.

Some commentators have suggested that higher margins reduce a markets' volatility by discouraging excess speculation. There is no empirical evidence to support the argument. Insight into the effect of credit margins on price volatility is offered in a recent study by the Federal Reserve Board. With regard to stock prices, its study noted:

> The behavior of stock prices since the enactment of margin regulation also does not support the argument that controlled margin trading will tend to reduce stock price volatility. Despite the relatively high federal margin levels and the very low levels of margin credit since the early 1930s, and the significant changes in the nature of the call loan market, stock prices have continued to be about as volatile as they were in the 50 years preceding margin regulation. Also, evidence on the behavior of stock prices around the time of margin changes suggests that such actions may have had little impact on stock prices, a finding that also casts some doubt on the importance of margin ratios for stock prices.[10]

There is no reason to believe that the same conclusions would not hold for futures prices.

Moreover, the futures industry is the only financial marketplace which has Congressionally-mandated speculative position limits to perform the express function of reducing excess speculation. See 7 U.S.C. Sec. 4a. These limits are applicable to all market participants. Exceptions are granted only upon application and verification that the positions of the participant are for the purpose of hedging. Thus, there is no need to even consider margin control as a means to curb speculation in futures markets.

If implemented, a proposal to raise futures margins could irreparably harm the futures markets and significantly raise risk in financial markets. Margin costs represent a key variable that must be considered in using a futures contract

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[10] Board of Governors of the Federal Reserve System, A Review and Evaluation of Federal Margin Regulations, December 1984, page 167.

TABLE 7

MARGIN SUMMARY OF ONE FUTURES CONTRACT POSITION OF THE MAJOR MARKET INDEX

NOTE: One MMI futures contract was purchased on October 14, 1987 at a price of 494.50 points, or $123,625.00

October 14-20 1987	Closing Market Value Of The MMI Futures Contract	Daily Change In The Value Of The MMI Futures Contract	Accumulated Paid-In Margin At Opening Of Trading	Accumulated Paid-In Margin As A Percent Of The Day's Closing Market Value	Percent Of Previous Day's Price Change Settled Before Opening	Credit Extended
Wednesday	$119,125	-$4,500.00	$4,500.00 1/	3.78%	—	0%
1. Thursday	$116,775	-$2,350.00	$9,000.00 2/	7.71%	100%	0%
2. Friday	$111,250	-$5,525.00	$11,350.00	10.20%	100%	0%
3. Monday	$84,125	-$27,125.00	$16,875.00	20.06%	100%	0%
4. Tuesday	$91,125	$7,000.00	$46,500.00 3/	51.03%	100%	0%

1/ Initial Margin Deposit of $4,500.

2/ $9,000 = $4,500 Initial Deposit + $4,500 loss in value.

3/ Margin requirements increase to $7,000 from $4,500.

on an exchange. An increase in margin requirements increases the cost of futures trading. Potential market users will be discouraged from using the futures markets by such a cost increase, thereby reducing market liquidity and the benefits of the futures markets to the economy. The economy will be riskier and potentially less stable as firms and individuals leave major risks unhedged.

Furthermore, if implemented, the costs imposed by these futures margin proposals would drive market participants to off-exchange and foreign markets that have few or no regulations (including margin requirements) and that compete with domestic exchanges offering risk management services in a regulated environment. An unmargined, unregulated off-exchange trade in risk-shifting instruments generates far greater risk both to individual firms and to the entire financial marketplace.

For example, today the Board of Trade's Treasury bond futures contract is the largest traded futures contract in the world. This contract is the envy of the financial futures industry. However, the identical contract is traded in London, Sydney, Singapore, and soon in Tokyo. The governments of Japan and Great Britain have dedicated themselves to making their markets the center of world futures trading. With these government mandates backing these foreign markets, any regulatory change which increases the trading costs or impairs the market efficiency of the Treasury Bond contract will immediately cause investors to simply push a different telephone button on their trading desk and take their business overseas and/or the foreign investor to no longer enter orders in Chicago. The data contained herein (*See* Table 5) which shows an eight-fold increase in London Treasury Bond futures volume when the Board of Trade bond contract was locked up-limit on October 20, 1987, is but one small - yet graphic - illustration of this undeniable fact.

Equally harmful and without merit are proposals to vest control over stock index futures margins in an existing federal agency, such as the Federal Reserve Board, or a newly created agency. Initially, the Federal Reserve Board has authority regarding stock margins because those margins involve the extension of credit. Credit regulation is one of the principal responsibilities of the Federal Reserve System. However, futures margins involve no extension of credit. In fact, no collateral exists to secure a futures margin deposit. Therefore, they are not a principal part of the Federal Reserve Board's expertise or authority.

Moreover, the exchanges, and not a federal agency, are in the best position to adjust margins quickly and efficiently in response to changing market volatilities. Federal regulators cannot have the same direct and immediate access to market information as exchange members who actively trade the markets, nor can they draw on the members' and exchanges' unique market expertise when analyzing such information to determine whether margin adjustments are necessary. The exchange clearinghouses' strong economic incentive to set appropriate margins, specifically, the incentive to minimize the probability of market disruption due to default, would be greatly reduced or lost. The exchanges have flexible systems in place that enable them to react immediately when the risks of participating in the market are suddenly increased. It is unlikely that a federal regulatory body would be able to respond as promptly. What is likely is that a regulatory body would establish unnecessarily high margins to compensate for its inability to respond quickly to changing market conditions and take insufficient account of costs imposed on users of the market.

In sum, futures margins are currently meeting their objective of ensuring market integrity. Proposals to mandate futures margin increases will not reduce price volatility but will only increase trading costs. Increased trading costs reduce the utility of futures markets for risk management, thus reducing their benefit to the economy as a whole while spurring the growth of unregulated off-exchange risk management substitutes outside the surveillance of exchanges or government regulators. Furthermore, foreign markets in London and Tokyo which compete with United States futures markets and which have copied United States futures markets are more than eager to take away our domestic futures business if it becomes the least bit non-competitive for any reason.

The Brady Task Force Report directly supports several of these factual premises. Initially, the Commission recognized that "... the concept of margins on futures differs fundamentally from that of margins on stock investments." *Brady* at 64. The conclusion was supported long ago by the New York Stock Exchange.

> Often futures market margins are assumed to be the same as stock market margins. In fact, however, they are quite different.[11]

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[11] *Statement of Frank J. Jones*, Executive V.P. and CEO, New York *Futures Exchange, a wholly-owned subsidiary of the New York Stock* Exchange, at joint Hearings before the House Subcommittee on Oversight and Investigations and Telecommunications, Consumer Protection and Finance, June 7, 1982 at 452.

Moreover, the Brady Report found that futures margins performed their primary function of risk management well during the October markets.

> Despite low margin requirements, the financial performance control as part of futures margins has operated in a sound and effective manner on an intramarket basis. Id.

However, the Brady Report made a suggestion that futures margins need to be "consistent with" securities margins due to the interrelated nature of the two marketplaces. Brady at 65.

As we have already discussed, one cannot simply take futures initial margin levels, ignore the effect of daily variation margin payments, and state categorically that securities margins are higher or better than futures margins. Moreover, given their different functions (insurance premiums vs. financed purchase payment), futures margins economically should be at lower levels. Therefore, these margins are already consistent. Interestingly, the Brady Report suggestion of "consistency" between the two may be facilitated by a suggestion made by the Task Force: implementation of a form of cross-margining.

The concept of cross margining encompasses the reduction of margin levels given to a "hedged" position which reduces or manages the risk of the position. For example, if someone holds twenty-five blue-chip stocks in a portfolio and hedges the value of those premiums by taking a short position in the MMI stock index options or futures market, the risk of loss from owning those stocks has been greatly reduced. Thus, the risk to the interrelated markets of a decline in the value of the stocks resulting in the owner not being able to fully fund the margined stock position is greatly reduced and a reduced margin level is justified. It should be noted, however, that cross margin would reduce the flow of funds in the interrelated market system, but at the price of having fewer funds in total available in case of a default.

The futures industry has been working to achieve a form of cross margining for some time. The Board of Trade Clearing Corporation does so in certain markets to some degree already. Moreover, some form of cross margining of futures and options positions is a critical feature of the recent joint venture agreement between the Chicago Board of Trade and the Chicago Board Options Exchange. Thus, private sector implementation of cross margining has already begun and will continue; the concept need not require any legislative action.

In sum, arbitrarily increasing futures margins will result in futures trading going to less expensive, foreign markets. One of the mandates to the Brady Task Force was to suggest methods to assure free, fair and competitive U.S. financial markets. We cannot forget that goal in any discussion of potential legislative action.

D. Clearing Mechanisms

Another area of much discussion is that of the clearing and credit mechanisms of the marketplaces. The Brady Task Force recommended that clearing and credit mechanisms need to be unified to reduce the chance of financial gridlock and the attendant risk to the financial system. Brady at 64. Despite the seemingly insurmountable problems inherent in having one "common clearing" entity to all trades, the futures industry has been moving toward consolidation of clearing and credit information and common processing for many years. Additionally, several changes can now be made to expedite the goal of improved clearing and credit mechanisms.

The Board of Trade and Chicago Mercantile Exchange clearinghouses (which together account for approximately 80% of the U.S. futures trades) have for years exchanged daily pay/collect information, the data which details the daily margin payments throughout the system. Additionally, although not yet implemented, all other domestic futures exchange clearinghouses now have agreed to join this system. The Options Clearing Corporation (the sole clearinghouse for U.S. exchange-traded securities options) recently also has agreed to join in this exchange of critical data. The National Securities Clearing Corporation (the principal clearing entity for securities trades) has been asked to join in this information sharing. Thus, the detailed data on the critical daily flow of funds among member firms will soon be shared by most of the intermarket clearing entities and could soon be shared by all.

While great strides have been made to achieve common processing of all futures trades, total unification of all clearing in all related markets remains a complex undertaking fraught with problems which may result in greater danger to the ultimate solvency of the financial markets than currently exists. Consolidating all clearing in one entity reduces the number of independent risk managers thereby possibly decreasing efficient risk management. It also would centralize the economic loss due to a market participant's potential default thereby potentially reducing the financial solvency of the system. By way of contrast, the existing system of "compartmentalization" may be more prudent. Additionally, settlement and clearing procedures vary enormously even within the futures industry itself. Moreover, while futures and options settle all trades daily, securities settle on a five business day basis; reconciliation of settlements must be made before discussion of consolidating securities clearing with futures and options clearing can even begin. Thus, common clearing is not achievable with the simple stroke of a pen, even if it were certain to be a desirable goal.

As previously mentioned, a form of what is loosely referred to as "cross margining" is already in existence at the Board of Trade and is an integral part of our joint venture agreement with the Chicago Board Options Exchange. This concept could be expanded across the various financial marketplaces. However, while such a margining approach may aid the flow of funds by reducing the amount of funds in the system, that reduction of funds in the system may increase the risk of insolvency. Therefore, careful study of any cross margining concept must be done before there can be any final assessment of its value.

There are, however changes which can and should be made to strengthen the clearing and credit mechanisms. The CBOT proposes that all futures and securities options clearing organizations adopt a system of daily collects as well payment upon request. Such a system would go a long way towards reducing the credit demands on the system and substantially reduce the spectre of financial gridlock which the Brady Report raised.

Solvency of the entire futures system could be enhanced greatly by adoption of the risk-based capital rule proposed by the Chicago Board of Trade and the Chicago Mercantile Exchange and currently pending before the Commodity Futures Trading Commission. Additionally, all bank and financial exchange holidays should be coordinated. These changes, in conjunction with those already in place and in progress can go far toward avoiding the risks of financial gridlock.

To best understand these recommendations, one first needs to understand how futures clearing, particularly at the Chicago Board of Trade, is currently done.

Contracts traded on a futures exchange are cleared through a clearing organization (the "clearinghouse") which assured the financial integrity of each trade by becoming the buyer to each clearing member seller and the seller to each clearing member buyer. In essence, the clearinghouse acts as a third party guarantor on all transactions. Trades are submitted to the clearinghouse through its member clearing firms, which act on behalf of the parties to the trades. The Board

of Trade Clearing Corporation, established in 1925 as an independent entity, is the clearinghouse for all Chicago Board of Trade contracts.[12]

The concepts of margin and daily settlement are unique to futures markets and fundamental to the financial integrity of the clearing process. Futures margins are a performance bond required of both sellers and buyers to guarantee that they will perform the futures contract unless the obligation to do so is offset by an opposite transaction. Coupled with the daily official settlement process, futures performance bond margins ensure that each day's market obligations are settled in full with cash. No credit is extended.

Daily settlement is a two step process which involves: (1) the daily (or, at the Chicago Board of Trade alone, the twice daily) determination of whether an account has sustained gains or losses by comparing the prices at which futures contracts in the account were entered with the contracts' respective settlement price[13] a process referred to as "mark-to-market"; and (2) the daily distribution of gains and losses based on this determination. Daily settlement of accounts occurs at both the clearing firm and clearinghouse levels.

A customer is responsible to his clearing firm (typically a brokerage house such as Shearson or Merrill Lynch where that customer has a trading account) for performance of his other obligations under a futures contract; customers, therefore, must deposit margins with their clearing firms. Clearing firms, in turn, are responsible to the clearinghouse for performance on all contracts they submit for clearing. The clearinghouse does not look beyond the clearing firms to the parties to a futures contract for performance on the contract. The clearing firms, in essence, guarantee performance to the clearinghouse on all trades - customer, floor trader and proprietary. All trades must be submitted to the clearinghouse.

Clearing firms, therefore, must deposit margins with the clearinghouse, and are legally obligated to make these payments regardless of whether they have collected margin from their customers. For this reason, membership in the clearinghouse is limited to firms that meet stringent financial requirements.

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[12] In 1986, the Board of Trade Clearing Corporation also became the clearinghouse for all contracts traded on the MidAmerica Commodity Exchange and the Chicago Rice and Cotton Exchange, which are affiliated with the Board of Trade.

[13] Settlement prices are established after each day's trading session and reflect market conditions at the close of the day's trading.

Clearing firms are required by exchange rules to impose minimum margin requirements on their customers. Exchanges establish minimum margin requirements at levels sufficient to cover the probable risk of daily loss under market conditions existing at the time. Customers must make minimum margin deposits, known as "initial margin", when they enter the futures markets. Critically, when remaining customer margin falls below an exchange-specified maintenance level through the daily settlement process as a result of adverse price moves, the customer must deposit additional funds to bring the margin deposit back to the initial margin level. A clearing member may liquidate the futures positions of a customer who fails to meet a margin call for additional funds. A clearing firm may be disciplined by an exchange for failure to collect adequate margin in accordance with the exchange's rules.

While minimum margin levels are set by the exchanges, clearing firms can and normally do require margin deposits at substantially higher levels. Clearing firm margin requirements reflect not only price movements but the ability of a customer to meet the contractual obligations that would arise with an adverse price movement. A clearing firm's responsibility to the clearinghouse for a customer's obligations ensures an accurate assessment of a customer's creditworthiness, the establishment of appropriate margin requirements for each customer and the prompt collection of margin from each customer.

At the clearinghouse level, two types of margin are required from clearing firms: original margin and variation margin.

Original margin is the performance bond required when positions are established. As with exchange margins, original margin requirements are determined on the basis of probable risk of loss. Since there is no price risk associated with sales that are offset by identical purchases or vice versa, original margin at the Board of Trade Clearing Corporation is required only on a clearing firm's net long (purchases) or short (sales) position. Board of Trade Clearing Corporation original margin may be posted in the form of cash, United States government securities, and/or letters of credit issued by an approved bank. The clearinghouse segregates original margin deposits in a separate account. The clearinghouse may increase original margin requirements when market conditions warrant, and issue calls for additional original margin payments from selected members if conditions warrant. These funds remain in a separate pool as long as positions are open. The clearinghouse will draw upon these

segregated original margin deposits only if a clearing firm fails to meet a variation margin call, a situation which has never occurred at the Board of Trade Clearing Corporation.

"Variation margin" is also known as "pays and collects". Pays" refers to the funds that a clearing firm must pay to the clearinghouse daily to settle losses in the firm's account at the clearinghouse. Profits, or "collects", are distributed from these fund payments. The Board of Trade Clearing Corporation requires variation margin deposits to be paid within one hour in cash; no other form is acceptable. The BOTCC issues calls for variation payments at least twice a day: once at 7:00 a.m., Chicago time, as part of the daily official settlement process; and once at 2:00 p.m., Chicago time.

No marketplace other than futures makes these daily mark-to-market variation margin collections (or, in the unique case of the Board of Trade Clearing Corporation, twice daily.)

A description of the Board of Trade Clearing Corporation's clearing operations illustrates the speed and efficiency with which margin obligations are determined and collected. The following steps are involved in this process:

1. Throughout the trading day, including the evening trading session[14], the Board of Trade Clearing Corporation processes and matches the day's trades. The night session is matched on a virtually continuous basis completed by 10:00 p.m. each night. The first full processing and matching process for the day and previous night's trading sessions are completed by late afternoon each day. After review by clearing members for errors, the final matched run is completed by 8:00 p.m., Chicago time, each day.

2. From the information generated by this matching process, the Board of Trade Clearing Corporation computes the original margin requirements for every clearing firm account on its books as part of the daily official settlement process. The Board of Trade Clearing Corporation also calculates the gains and losses experienced in each account as a result of price movements to determine the amount of variation margin, or "pays", required to settle losses and the amount of profits, or "collects", that the Clearing Corporation will pay out.

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[14] The Board of Trade began offering an evening trading session in the spring of 1987 for certain financial contracts. An evening trading session is treated as the start of the following day's daytime session.

3. Original margin and pay and collect information is made available to clearing members and their banks before midnight, Chicago time, each night. An official call for original and variation margin based on this information is issued at 6:00 a.m., Chicago time, the following morning.

4. Clearing firms must pay to the Board of Trade Clearing Corporation all original and variation margin requirements by 7:00 a.m., Chicago time.

5. The Board of Trade Clearing Corporation disburses "collects" to clearing firm accounts that experienced a gain. These payments are made out of the variation margin payments received by the Board of Trade Clearing Corporation, resulting in an official zero balance of pays and collects each day.

6. At 2:00 p.m., Chicago time, each trading day, the Board of Trade Clearing Corporation performs a separate intra-day calculation of gains and losses based on the positions held by a clearing firm on the previous day and on all matched trades executed the previous night and prior to 1:30 p.m., Chicago time, on the current trading day.

7. After 2:00 p.m., Chicago time, the clearinghouse issues calls for variation margin to settle the losses calculated at 2:00 p.m.

8. A clearing firm must satisfy this intra-day call for variation margin payments within sixty minutes.

9. The Clearing Corporation pays out all gains at the request of a member firm as a result of this interday variation collection.

10. In periods of great volatility, the Board of Trade Clearing Corporation will perform additional intra-day calculations of gains and losses and require additional variation margin payments. Margin calls must be satisfied within sixty minutes. These extra variation payments are designed to insure collection of all losses due to market movements that may have occurred between regularly scheduled variation calls.

As illustrated, the Board of Trade Clearing Corporation maintains tight control over margins as prices fluctuate, thereby assuring that sufficient margin money will be on deposit at all times to preserve the system's financial integrity.

The daily settlement process of futures demands speed and flexibility in the setting of performance bond margins so that the overall goal of minimizing risk, including default risk, can be met. For this reason, performance bond margins for customers are set by the exchanges through committees which are able to assess and respond quickly to changing market conditions. Similarly, original margin requirements for clearing firms are set by special clearinghouse margin committees with approval of the Board of Trade Clearing Corporation Board of Governors. These committees, which are comprised of exchange members who have unique and valuable market expertise, can meet at a moment's notice to examine the adequacy of performance bond margin levels in light of current market volatility and can change such levels to reflect daily price changes. The incentive to minimize market disruption due to default assures that appropriate margins levels are set. The Chicago Board of Trade made over 200 margin changes on over 100 separate occasions during 1987.

In sum, the futures markets have developed highly sophisticated, extremely efficient systems for the rapid collection of margins. These systems have met historically, and are currently meeting, their objective of ensuring market integrity. Since the formation of the BOTCC in 1925, no clearing member has defaulted and not one cent of customer funds at the Board of Trade Clearing Corporation has been lost due to default.

Regardless of the efficiency of the futures margining system and the flawless record of the Board of Trade Clearing Corporation regarding defaults, the Board of Trade readily recognizes that improvements can be made to its clearing and credit systems.

First, the Federal Reserve wire should be available to financial market participants throughout the critical periods of the financial marketplace trading day, specifically 6:00 a.m. to 6:00 p.m. Eastern Standard Time. The Federal Reserve wire is the means by which the payments between and among financial market participants must flow. In times of great market stress such as that witnessed in October, 1987, this flow of funds greatly increases as does the need for immediate transfer of funds to preserve participants' liquidity. Keeping the Federal Reserve wire open longer will help insure that funds will be in place where and when they are most needed even if unanticipated delays occur. While seemingly a modest proposal, the Board of Trade believes that had the Federal Reserve wire been open sooner and later during the week of October 19, 1987, what few flow of funds problems were encountered would have been diminished in severity if not eliminated entirely.

Also, since risk management is the key to financial solvency, basing capital requirements upon the risk of positions being held by a firm would better allocate the capital requirements of market *participants. The Chicago Board of Trade and the Chicago Mercantile* Exchange have proposed a revised, risk-based capital rule to the Commodity Futures Trading Commission for implementation in the futures industry. Adoption of such a rule would greatly facilitate the proper allocation of firm capital and encourage sound risk management.

Finally, all exchanges and the principal banks participating in the financial markets should coordinate planned closings for holidays. Having one linked marketplace open while another is closed presents a risk for any participant holding an intermarket position. Similarly, if payments cannot be made because banks are not open, the risk to the entire system is enormous.

Thus, the clearing and credit systems of the Chicago Board of Trade performed in an exemplary fashion during the week of October 19, 1987 as they have historically performed. We have nonetheless made specific recommendations as to ways in which all clearing and credit mechanisms can be improved. The adoption of such recommendations would result in a more financially sound, better integrated U.S. financial marketplace. For our part, we intend to take every step possible to achieve rapid implementation.

E. Jurisdiction

Subsequent to the October market events, there has been continuing discussion regarding the contours of SEC and CFTC jurisdiction. Questions have been raised as to the advisability of altering those agencies' jurisdiction with proposals put forth to merge the two agencies, surrender CFTC jurisdiction over stock index futures to the SEC, surrender SEC options jurisdiction to the CFTC, or subject both the SEC and the CFTC to the oversight of a third federal agency. Indeed, the report of the Brady Task Force recommends that an "overarching" federal agency, such as the Federal Reserve Board, be authorized to oversee the performance of the securities and futures markets and to coordinate those regulatory issues which have intermarket implications. We believe that there are better means to address the critical issue of intermarket coordination without the adverse consequences implicit in such proposals.

As the Brady Report confirmed, the futures and securities markets are an interrelated market, but with different functions and purposes. The very basis for CFTC jurisdiction over stock index futures lies in those functional differences between futures and securities markets. As we have previously stated, securities

exchange markets provide a means for transferring stock ownership, thereby facilitating capital formation. Futures markets transfer price risk. The goals of securities and futures regulation differ *accordingly and have fostered a different sort of* regulatory expertise. Securities regulation governs the formation and secondary distribution of capital. Futures regulation promotes the transfer of price risk by parties who are in the business of producing, owning or distributing the underlying product. These distinct goals would be compromised by a single regulator. As the Report of the House Committee on Agriculture on the Commodity Futures Trading Commission's 1978 reauthorization states:

> The Committee is of the view that jurisdiction over futures markets should reside in an agency such as the Commission whose regulatory role requires an economic expertise which focuses upon the risk-shifting and price-determining function that futures trading performs. Futures markets have not remained static and futures regulations have covered an increasing number of commodities as the benefits of futures trading have become more widely understood. The Committee does not believe that the public interest would be served by duplicating in one or more additional agencies regulatory authority over futures markets that presently exists in the Commodity Futures Trading Commission (H.R. Rep. No 95-1181, 95th Cong. 2d. Sess. 1978, p.13)

The Brady Task Force properly concluded that a merger of the Commodity Futures Trading Commission and the Securities and Exchange Commission would tend to create less efficient regulation without conferring any foreseeable benefits upon the financial markets. However, its recommendation that the Commodity Futures Trading Commission and the Securities and Exchange Commission continue to operate within their separate jurisdictions under the oversight of a third agency suffers from the same flaw and should not be adopted. The addition of another layer of federal regulation over the financial marketplaces would only decrease market efficiency and increase regulatory costs.

While the Federal Reserve Board performed a vital function throughout October's market decline, involvement of the Federal Reserve in the oversight role discussed by the Brady Report is totally unworkable. In the first place, such an oversight role would divert the Federal Reserve from its primary function as the chief architect of the nation's monetary policy. Moreover, the Federal Reserve lacks the kind of expertise which would be required for such a role. Despite the Brady Report's emphasis on coordination as opposed to direct intervention, the regulatory issues, i.e., margin, clearing, information-sharing, trading halts, which allegedly require such coordination, represent critical operational details requiring day-to-day, front-line involvement. The insertion of the Federal

Reserve in such a role would add an utterly new dimension to that agency's jurisdiction to the detriment of the nation's securities and futures markets.

As the Brady Task Force emphasized, improved intermarket coordination is and should be the goal towards which we must advance. The benefits of such improved intermarket coordination can be achieved through improved information sharing between the securities and futures markets and their regulators. Under existing legislation, the CFTC and, to a somewhat lesser extent, the SEC have adequate authority to deal with market emergencies. With improved communication as to matters of intermarket concern, the CFTC and SEC will have adequate means at their disposal to gauge the existence of an emergency and the proper means with which to address it.

Indeed, the SEC and the CFTC have coordinated their efforts to address matters of intermarket concern since the inception of stock index futures trading. For instance, the SEC has an established role in the process whereby stock index futures contracts are approved at the CFTC and exercises veto power over such contracts. Throughout the week of October 19, there was significant inter-agency and intermarket communication in reviewing market conditions.

The Chicago Board of Trade unreservedly supports the goal of improved communication and coordination between the various market segments. Within the futures industry, we have been a leading proponent of financial information-sharing among the various exchanges and spearheaded an effort to obtain industry-wide sharing of pay and collect information from the various clearing entities.

We also support increased cooperation and interaction between the securities and futures markets in the stock index area and propose that regular information sharing should be undertaken by the securities and futures markets on a formalized, regular basis. To this end, the possibility of an intermarket counsel to review information regarding trading activity in the stock index futures and stock markets should be undertaken. We believe the regular coordination of timely market information by such an intermarket group would address the goals enunciated in the Brady Report without installing a cumbersome, extra layer of regulation over delicate market mechanisms.

In this connection, we must be ever mindful of the world-wide competition which U.S. markets face. The Brady Report forcefully reminds us that the financial markets have become one global market. Nonetheless, there are competing marketplaces within that global

market which are anxious to attract business which is currently done in New York and Chicago. We cannot afford to inhibit the growth and operation of U.S. financial markets with needless regulation.

Changes in the current regulatory structure should be carefully weighed against the possibility that U.S. business will seek asylum in unregulated foreign marketplaces. The goal of intermarket coordination can be met without the further erosion of U.S. market share. We urge the Congress to support the concept of formalized intermarket communication on issues of joint concern with the participation of the SEC, the CFTC, and the relevant stock index futures and stock markets as a superior alternative to the creation of a third or super-agency.

VI. ADDITIONAL ISSUES

A. Front-Running

One of the issues currently being discussed is the concept of frontrunning between the securities and futures markets. Hypothetical examples have been cited where customers of a firm execute transactions on a securities exchange. The firm handling the execution of the customer's transaction trades ahead of its customer's orders for its proprietary trading account in the futures market.

The CBOT has rules virtually identical to those existing in the securities industry which prohibit unjust and inequitable trading practices and which have been interpreted to apply to frontrunning. Such trading activity could, therefore, be held to be in violation of CBOT rules. The CBOT does investigate for such violations and has investigations currently pending.

As was also explained earlier, the Office of Investigations and Audits has a very sophisticated program for detecting intra-market frontrunning, i.e., activity occurring on the Chicago Board of Trade. However, the quality of trade data information existing in the securities markets is not as good as that which exists in the futures markets nor is it available in any meaningful time frame. Therefore, inter-market investigations are currently hampered by the lack of precise market data from the securities industry.

This deficiency could easily be remedied by improving the audit trail in the securities industry. Such information or the sharing of such information could then be coordinated among industry self-regulatory organizations such as already exists through the Intermarket

Surveillance Group. The CBOT would be quite willing to work with the CFTC, SEC, CME, NYSE and other securities and futures exchanges to produce necessary improvements.

B. Role of the Specialist

The Brady Report appropriately raises several issues with respect to the performance of the specialist system at the New York Stock Exchange during the week of October 19. In many respects, the specialist system is the antithesis of the open outcry system under which futures markets operate. The specialist exercises broad control over the trading of an individual stock while in the futures market, a crowd of market-makers compete in an auction-style manner. The justification for the creation of the specialist's exclusive franchise is the need to provide a stable and orderly market, while the emphasis on price discovery in the futures markets mandates competing bids and offers.

The efficiency and reliability of the open outcry system is well established and received new confirmation during the recent market crisis. The Board of Trade's markets remained open throughout that turbulent period and its futures market professionals maintained an arena in which price discovery and risk transfer could occur. In stark contrast, however, the specialists at the New York Stock Exchange appeared overwhelmed by the volume and direction of trading and ceased to be an effective stabilizing force.

As the Brady Report showed, the specialists frequently failed to counterbalance severe selling pressure on October 19 and, indeed, nearly 30% were net sellers on that date. Likewise, on October 20, when the direction of trading was reversed, the Brady Report showed that specialists generally reinforced the market trends. Moreover, due to the inability of the specialists to create an orderly market, 87% of the stocks which compose the Dow Jones Industrial Average failed to open in a timely fashion on October 19 and 76% on October 20, thereby exacerbating market uncertainty. Thus, the Brady Task Force is correct in questioning whether specialist performance and capital justify the retention of a franchise that amounts to a virtual monopoly.

Questions regarding the adequacy of the specialist system have previously been raised. In a 1972 study of the New York

Stock Exchange specialist system[15] conducted by the Securities and Exchange Commission in preparation for Senate hearings[16], the SEC reported that it had

> "...discovered a need for considerable improvement in the Exchange's procedures for surveillance of the financial status of specialists...[and] raised serious questions as to the adequacy of specialists' performance in days of stress and otherwise which require consideration and the opportunity for review by the NYSE." (p. 34)

The SEC further found a "disturbing" tendency on the part of specialists over a four-month period to be net buyers in a rising market and net sellers in a declining market. The SEC describes such behavior as "destabilizing" and in direct violation of the specialists' affirmative obligation to lend orderliness to the markets.

Moreover, in addressing the monopolistic nature of the specialist system, the SEC report states that:

> "More recently, the SEC has expressed its belief '... that the liquidity needs of individual and institutional investors can best be provided by policies fostering the development of competition among dealers who are specialists, market-makers and block positioners. Such competition will mitigate the very difficult problem which now exists of developing and enforcing rules designed not only to prevent specialists from abusing their privileged position, but also to motivate them to perform satisfactorily under widely differing circumstances and in light of varying risks and pressures'." (p.38)

Such criticism of the specialist system has been renewed in the wake of the recent market events by a wide range of commentators including equity traders, pension fund managers and government regulators. At a meeting before the CFTC, Frederick Grauer, president of Wells Fargo Investment Advisors, said, "We believe the principal responsibility rests with the NYSE for lacking the systems capacity and depth of capital to respond to the legitimate needs of its investors."

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[15] Securities Industry Study (Part 4)

[16] Hearings before the Subcommittee on Securities of the Committee on Banking, Housing and Urban Affairs, U.S. Senate, August 8 and 9 and Oct. 5, 1972.

An industry group which represents some of the largest U.S. pension funds, the Committee on Investments of Employee Benefit Assets, produced a report which stated "The failure of the specialists to provide orderly and timely transactions contributed to the negative psychology of the moment, disorderly markets, and created a discontinuity with the futures markets."

As has been noted, the specialists frequently halted trading in their stocks during the October 19 market decline and the following days. It is NYSE policy to allow for trading halts and delayed openings when there are large order imbalances. On October 19, it took over ninety minutes for all 30 of the Dow Jones Industrial stocks to open. The following day, not all of the Dow stocks were open until 1:30 p.m. These stocks also experienced frequent trading halts. (See attached Table 8 showing the percentage of Dow stocks which were not trading at various times on October 19th, 20th, and 21st.)

These trading halts indicate that the specialists were unable or unwilling to provide the necessary liquidity to keep the market functioning and provide continuous trading. The lack of specialist liquidity almost resulted in an exchange-wide trading halt on October 20 at approximately 11:30 a.m. The NYSE's chairman, John Phelan, reportedly discussed his concern as to whether the specialists could handle the order imbalances with White House Chief of Staff, Howard Baker. According to a December 7, 1987 New York Times article, "White House officials said Mr. Baker was deeply worried about the psychological impact of closing the markets, and feared a closing would touch off a panic that would make them difficult to reopen." Although the Exchange did not close, many of the major stocks had stopped trading.

Additionally, the New York Stock Exchange is reportedly investigating some specialist units with respect to large gaps which occurred between the closing and opening prices of certain stocks.[17] The NYSE is attempting to determine why such price fluctuations occurred and whether certain specialists profited from such fluctuations.

We believe that a number of modifications to the specialist system should be considered in response to the October 19 market decline. Specifically, serious consideration should be given to instituting

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[17] Spear Leeds and Kellog and M.J. Meehan & Co. have been forced to resign their specialist positions in J.P. Morgan & Co. and Gould, Inc., repsectively. A number of investigations are reportedly in progress.

TABLE 8

Percentage of DJI Stocks Not Trading
(By Hour of Day)

Time	10/19/87	10/20/87	10/21/87
9:30 a.m.	87%	76%	83%
10:00 a.m.	43%	17%	20%
10:30 a.m.	37%	17%	3%
11:00 a.m.	3%	3%	3%
11:30 a.m.	0%	30%	0%
12:00 p.m.	0%	33%	3%
12:30 p.m.	0%	20%	0%
1:00 p.m.	0%	7%	3%
1:30 p.m.	0%	3%	0%
2:00 p.m.	0%	0%	0%
2:30 p.m.	0%	0%	0%
3:00 p.m.	0%	0%	0%
3:30 p.m.	0%	0%	0%
4:00 p.m.	0%	0%	0%

Source: Chicago Mercantile Exchange and F. E. Fitch, Inc. (New York Stock Exchange) a system of competing specialists. With the continuing increase in NYSE volume, substantial numbers of shares often must be funneled through a single specialist in a short period of time. If there were more than one specialist for each stock, order imbalances would be less likely to lead to trading halts and delayed openings. As the October 31, 1987 edition of The Economist states, "one under-capitalized market-maker in a stock is more likely to withdraw and avoid making a market than several competing market-makers or a crowd of jostling traders in a pit". Competition should improve market continuity and result in greater efficiency in specialist pricing.

There have been several other proposals aimed at improving the specialist system, including an increase in specialist capital and the publication of the specialists' limit order book. We believe that such proposals should be given consideration although the introduction of competing specialists might obviate the need for such further adjustments. In light of the specialists' performance in October, proposals have also been made to limit their discretion to halt trading. We have already discussed the need to eliminate such discretion in our discussion of "circuit breakers". Like price limits in futures markets, trading halts should be instituted in a predetermined fashion with advance public notice as to the exact circumstances under which they will occur.

C. Portfolio Insurance and Index Arbitrage

Some critics have "pointed a finger" towards certain strategies used by stock index futures traders as precipitating the October, 1987 decline and/or exacerbating the amount of the fall. In particular, "program trading" and "portfolio insurance" strategies utilizing stock index futures contracts have been singled out.

These accusations are not a recent development. In the past several years, the effects of index arbitrage and portfolio insurance on the underlying market have been widely debated. A number of observers have maintained that these type of strategies have increased

volatility in the market in recent years. The existing empirical evidence, however, does not support these contentions.[18]

In a similar manner, critics have blamed index futures for sharp price declines on certain trading days. However, comprehensive analyses prepared by the SEC after the major losses on September 11 and 12, 1986, and by the CFTC after the January 23, 1987 fall in prices, conclude that index futures trading strategies did not cause the declines observed on those days.[19]

While the events of October, 1987 may ensure that this debate will continue in the future, it is nevertheless clear that activities in the MMI at the Board of Trade had a minimal influence on the underlying market during this period. MMI futures are a relatively small part of the total stock index futures complex. In 1987, MMI futures averaged 10,399 contracts a day which placed it third behind the Chicago Mercantile Exchange's S&P 500 (75,275 contracts per day) and the New York Futures Exchange's[20] N.Y.S.E. Composite Index (11,525 contracts per day). In terms of market share, volume in MMI futures only accounted for approximately 10.4 per cent of all stock index futures contracts.

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[18] For example, see:

Commodity Futures Trading Commission, Securities Exchange Commission, and Federal Reserve, "A Study of the Effects on the Economy of Trading in Futures and Options" December 1984.

Salomon Brothers, "Market Volatility: An Updated Study", January 1987.

Edwards, Franklin, "Financial Futures and Cash Market Volatility", Columbia Working Paper, June 1987.

[19] Securities and Exchange Commission, "The Role of Index-Related Trading in the Market Decline on September 11 and 12, 1986", March 1987.

Commodity Futures Trading Commission, "A Review of Stock Index Futures Trading on January 23, 1987", July 1987.

[20] The New York Futures Exchange is a wholly-owned subsidiary of the New York Stock Exchange.

The relatively small market share of the MMI has limited the contract's possible impact in the cash market. For example, regarding program trading strategies, total index arbitrage related positions amounted to about 1.3 percent of total NYSE share volume on October 16 and less than 1 percent on October 20.[21]

With respect to portfolio insurance activities, the MMI, unlike the more broadly based S&P 500 and the NYSE Composite indices, has not been widely used by portfolio insurers. On October 19, total institutional investor selling of MMI futures represented less than one percent of NYSE dollar volume.[22]

Finally, it should be noted that even though the Exchange firmly believes that trading strategies utilizing the MMI have not had much, if any, influence, much less a detrimental influence, on the stock market, the Board of Trade has taken the initiative to protect against any potential future development that may occur. Specifically, the Board of Trade responded quickly by proposing permanent price limits on its stock index contracts. The CFTC granted approval on January 12, 1988, and on the following day the Exchange imposed the limits on a permanent basis.

D. Speculative Position Limits

The question has arisen as to the advisability of adopting stricter speculative position limits for the futures markets. At the outset, it should be noted that the futures markets, unlike the equity securities markets, already have in place Congressionally-mandated position limits which apply to all contracts. These limits are established by the Commodity Futures Trading Commission with respect to agricultural futures; position limits for all other futures contracts are established by the exchanges with the approval of the CFTC. Such position limits apply to all investors. Only *bona fide* hedgers may apply for an exemption from such limits subject to exchange approval. Persons seeking hedge exemptions must submit an application setting forth the basis upon which the exemption may be granted. Such applications are reviewed by the exchange and, when approved, permit the hedger to exceed speculative position limits by

a specific amount of contracts. The approval to exceed speculative limits may be withdrawn by the Exchange at any time.

In accordance with the provisions of the Commodity Exchange Act, speculative position limits are designed to eliminate *excessive* speculation which might tend to cause manipulation or other misuse of the markets. They are not intended to discourage speculation since speculators are needed to foster and facilitate the risk transference function of the futures markets.

The Board of Trade monitors compliance with speculative position limits through a system of member firm reporting and market surveillance. Violators of speculative position limits are subject to the disciplinary sanctions of the Business Conduct Committee. It should be noted, however, that that were no violations of Board of Trade speculative limits in the Major Market Index contract during the October market crisis.

The combination of exchange-set margins, pre-established price limits, and speculative position limits help assure that futures markets operate in an orderly and efficient fashion. However, the absence of position and price limits in the equity securities markets should be examined.

E: Effects of Stock Index and Financial Futures on Underlying Securities

Stock index futures contracts offer portfolio managers, underwriters, dealers and financial institutions a cost efficient vehicle for hedging and risk transference. The depth of the index futures markets normally offers lower transaction costs and promotes greater liquidity for buying and selling than cash market transactions consisting of similar baskets of securities. This increased liquidity and efficient risk reduction mechanism translates into a reduced cost of capital to firms which enhances the process of capital formation.

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[21] *Source*: Commodity Futures Trading Commission.

[22] *Id.*

The hedging and capital formation benefits of stock index contracts have been well documented by a number of regulators, market users, and academics in recent years.[23]

For instance, a joint Federal Reserve Board, CFTC, and SEC report on the futures markets notes that many investment bankers indicate that they are more willing to underwrite securities because of the opportunity to hedge with stock indexes. Securities are underwritten in order to provide additional capital for a corporation. The investment bank bears the risk of declining price movements during this process. By transferring this risk to the stock index futures market, the underwriting costs to the corporate issuer are substantially reduced and additional capital formation is encouraged.

This view is also supported by James O'Brien, a member of the staff of the Federal Reserve System. He states:

> "The introduction of stock index futures with low transaction costs undoes the effect of transaction costs associated with stock leveraging. With respect to stock leveraging then, stock index futures tend both to encourage capital formation and to shift the composition of capital toward less risky activities." Further, "An important result...is that stock index futures that involve relatively low transaction costs exert their effects on capital formation by facilitating risk transfer."[24]

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[23] For example, see:

Board of Governors of the Federal Reserve System, Commodity Futures Trading Commission, Securities and Exchange Commission, "A Study of the Effects on the Economy of Trading in Futures and Options", (1984).

Figlewski, Steven, "Hedging With Stock Index Futures: Theory and Application in a New Market", Journal of Futures Markets, Summer 1985, pp. 183-200.

O'Brien; James, "Stock Index Futures and Capital Formation in a Capital Asset Pricing Model with Transaction Costs", Financial Futures and Options in the U.S. Economy, (1986).

"Pension Funds: The Billion Dollar Funds", Intermarket, June 1986.

[24] O'Brien, op. cit., pages 106 and 116.

It is evident that stock index futures markets have become closely interrelated with the underlying market. This fact has also been discussed in the Brady Report. Specifically, it is concluded that:

> "Analysis of market behavior during the mid-October break makes clear an important conclusion. From an economic viewpoint, what have been traditionally seen as separate markets - the markets for stocks, stock index futures, and stock options - are in fact one market. Under ordinary circumstances, these marketplaces move sympathetically, linked by financial instruments, trading strategies, market participants and clearing and credit mechanisms."[25]

In short, stock index futures play a key economic role. If unnecessary restrictions and impediments are placed on these contracts, the cost of equity capital to firms will potentially increase and the process of capital formation will be hindered and made less efficient.

Finally, it should be noted that while a tremendous amount of attention has been directed recently to stock index contracts, the economic function of other futures contracts has been well documented over the years. While research has spanned various financial and agricultural contracts, several key conclusions have been repeatedly drawn. First, futures contracts play a major role in providing a risk reduction mechanism by which risk adverse institutions and individuals can hedge against adverse cash price movements.[26] Second, futures contracts aggregate and convey additional information and increase price reporting of the underlying commodity.[27] Third, the introduction of futures trading on both agricultural and financial contracts has not increased the volatility of cash prices.[28]

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[25] Report of The Presidential Task Force on Market Mechanisms, January 1988, Executive Summary, page 3.

[26] See, for example:

Keynes, A Treatise on Money.

Hicks, Value and Capital.

Working, "Hedging Reconsidered", Journal of Farm Economics, 1953, and "Futures Trading and Hedging", American Economic Review, June 1953.

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[27] See, for example:

Grossman, S.: Journal of Finance, May 1976; Review of Economic Studies, 1976; Journal of Economic Theory, 1978.

Grossman and Stiglitz, "Information and Competitive Price System", American Economic Review, May 1976.

Newbery and Stiglitz, The Theory of Commodity Price Stabilization: A Study in the Economics of Risk, 1981.

[28] See, for example:

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Charles, D., and Workman, R., "Measuring Patterns of Price Movements in the Treasury Bill Futures Market", Journal of Economics and Business, Vol. 33, Winter 1981, pp. 81-87.

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VII. CONCLUSION

Throughout the market crisis in October, 1987, our nation's futures markets performed the function they were intended to perform under severe pressure. The performance of Board of Trade markets was particularly impressive as unprecedented numbers of institutional and individual investors sought the risk-transfer facilities of our U.S. Treasury Bond futures contract. Our markets were open, our quotes were available to the world as a significant price barometer, and not a single clearing default occurred despite record volume.

Proposed changes in the manner in which stock index futures contracts are regulated should be carefully reviewed in light of the proven performance of the futures markets and the vital distinctions which exist between securities and futures. Better co-ordination and information-sharing between the securities and futures markets and their separate regulators, the SEC and CFTC, can and should occur. Circuit-breakers should be applied in an even-handed and uniform fashion across markets. An audit trail system like the Board of Trade/Chicago Mercantile Exchange CTR-Plus system should be adopted by the securities markets. Better information-sharing regarding pay and collect data information should also be achieved between futures and securities clearing entities. Review of matters of intermarket concerns should take place on a regular and formalized basis with full participation by the relevant stock and stock index futures markets and their respective regulators. The adoption of such measures require no legislative or regulatory action, yet will fully address the potential problems which can arise in separate but inter-related markets without imposing costly regulations, e.g., higher margins, or unwieldy regulatory mechanisms, e.g., creation of an intermarket super-agency.

In light of the very real competitive challenge posed by foreign futures markets, any proposals to modify the manner in which futures are traded in this country must be carefully weighed against the likelihood that the implementation of such proposals will drive U.S. business off-shore. Increased regulatory costs will not only undermine our worldwide competitive position, but also force U.S. citizens to seek markets which offer minimal customer protections.

The CHAIRMAN. Mr. Mahlmann, you indicated that you feel—I think you said that the SEC, CFTC regulations should be ratified; is that correct? Is that the term you used?

Mr. MAHLMANN. Mr. Chairman, I indicated in my testimony that the CFTC right now has emergency powers. The emergency powers covering, under emergency situations, closing the market and/or raising margin levels, for instance. I think the same emergency powers, if you have two regulators that regulate by their function, and they do it well within their respective fields, if you have two equal regulators at the table, that means that the CFTC emergency powers should also be conveyed or similar powers given to the SEC.

The CHAIRMAN. You made the same statement that was made by other witnesses here today, which I think is a true statement, that the Brady report is absolutely right in calling this a unified market; is that correct?

Mr. MAHLMANN. I made the statement, it is unified, but it is also of global dimension.

The CHAIRMAN. Absolutely; I understand that. And that, therefore, it would seem to follow that we ought to do our best to find a way to have a unified, consistent regulation.

If you have a unified regulation, doesn't it seem that it would be desirable at some point where there might be, as the SEC Chairman testified, irreconcilable differences. Those are bound to occur. You have to have some way of resolving the differences, and you have to lodge that authority in some agency.

Is that right or not?

Mr. MAHLMANN. Mr. Chairman, I would submit to you that Congress has approved, in order to monitor the different function of the two marketplaces two agencies. I think those two agencies are run and have been in the past by extremely capable people, reasonable people, that I am sure can, together determine emergencies that could occur on cross-market issues.

The CHAIRMAN. As you know, Mr. Mahlmann, when Congress did that, there was no such thing as a futures operation that linked the New York and the Chicago markets, as clearly as it does now. Your testimony this morning indicated that 1982 was the beginning of the futures markets. Mr. Melamed told us that. Isn't that correct?

Mr. MAHLMANN. Mr. Chairman——

The CHAIRMAN. Congress hasn't acted since then.

Mr. MAHLMANN. We heard Senator Dixon's testimony this morning on an issue that occurred in Chicago, where three separate agencies of the U.S. Government worked together which would, in my mind, be more difficult than only two working together. And they came to a good conclusion, and I think that can be also attained between the SEC and the CFTC.

The CHAIRMAN. They came to a good conclusion over a period of many, many months. They didn't have to do that in 1 day. They didn't have to make a decision all at once. They didn't have to do it when the market dropped by a record amount at one time, which could happen again.

MAJOR MARKET INDEX

Let me go on to ask this. During the morning of October 20, the Major Market Index traded a significant premium move above the cash index. There were reports of manipulation of this contract, which, according to the CFTC, were groundless.

Can you explain what went on with MMI trading during that crisis, and can activity in the MMI move the stock market?

Mr. MAHLMANN. Senator, No. 1, the SEC report that just came out indicated that there was absolutely no manipulation. The MMI, as I indicated in my testimony, is but 2 percent of the Board of Trade volume, and it is a mere 10 percent of the total stock index volume in the U.S. futures industry.

The total capitalization of the top 20 stocks that make up the MMI contract is something like $400 billion. I don't think there is one individual or even a component group that can substantially move the MMI in any one way.

The CHAIRMAN. Now the CFTC study of the Major Market Index concludes that the futures contracts in that index were not manipulated on October 20, as you said, as you alleged in the Wall Street Journal. And you agree. The Brady Commission report did not provide an affirmative explanation, however, of how the market rose the equivalent of 440 points on the Dow Jones Index in a matter of less than 1 hour. As a matter of fact, it was in 45 minutes.

How did the market rise so much between 12:15 and 1 o'clock on October 20?

Mr. MAHLMANN. Senator, I have my own interpretation, and they are multiunderlying economic functions that all converged into a time period. No. 1, the Federal Reserve had opened up its liquidity window that morning and had announced it to the banking system. The banking system, in turn, still had to evaluate each customer, meaning with the announcement, the liquidity didn't flow from the Fed to the bank to the customer automatically. They were all evaluated individually and got word during the morning of their financing coverage. There were several major stock buybacks that were announced during that morning.

All of these points converged in time and led to the rally back on Tuesday morning, and it happened to be that our MMI contract was the only barometer available at that point in time, where you could read the temperature.

The CHAIRMAN. That is a brilliant explanation, and I am sure it makes a lot of sense, but 440 points is far, far greater than the corresponding change in the market on Tuesday, on Terrible Tuesday. It went up, but nothing like that, at any time. There doesn't seem to be much of a relationship. Yet the same forces were at work on the New York Stock Exchange that were at work on the MMI.

Mr. MAHLMANN. Well, to my knowledge, we have as much as almost 80 or 90 percent of stocks were literally not trading during midday on the New York Stock Exchange, so that the only barometer that you did have was our MMI contract. We kept our MMI contract open, because we determined through phone calls to exchanges that 17 of the stocks that comprised the MMI were trading, not necessarily on the New York Stock Exchange. We made the decision to keep the contract open, because, in a way, our congressional approval reads that we provide, No. 1, price discovery and No. 2, market risk transfer. And it was in that fashion that we decided to keep the market open, and in addition, we had gotten a phone call from the White House the day before from Beryl Sprinkel, that we should do everything in our power to keep markets open and not close them.

The **Chairman**. Very good. Thank you, sir. Senator Riegle.

Senator **Riegle**. Thank you. I'm surprised, did the calls come from Jim Baker?

Mr. **Mahlmann**. They were on the instruction from Mr. Baker. From Howard Baker.

Senator **Riegle**. I see. And that was stated in the phone call?

Mr. **Mahlmann**. Yes, it was.

The **Chairman**. You know, Beryl Sprinkel is a Chicago man.

Senator **Riegle**. Oh, well, I understand. [Laughter.]

I was just trying to get a sense for the chain of command. You know, you might have gotten a call from somebody, you know, in some other department of government too, I mean. He would not normally be the logical person to make the call unless specifically delegated. That is why I asked the question.

Mr. **Mahlmann**. Senator, I received a phone call. We were in New York. It was on the 19th, and we were in New York for a board meeting, and we had just gone back to make arrangements to head back to Chicago, seeing the gravity of the situation. I received the call from Beryl Sprinkel, and he told me he was calling at the request of Howard Baker and that Howard Baker was in contact with others; they were sharing the calls. And I think he had already spoken to Mr. Melamed the same day. He asked us what we saw in our markets. We had been in constant communication at home, and we told him that our market were functioning well. As Chairman Melamed said, we had a small stock index but we have the largest bond contract in the world. We were watching it very, very closely. We were in contact with our clearing corporation and the other exchanges, and I told him I had just left the executive committee, we were very confident of the functioning of our market. He said, "Good. Are you going to stay open?" We said, "Yes." He said, "Good. We hope you can. We encourage you to do so."

Senator **Riegle**. I am going to ask you to give an answer to the question I am going to pose now for the record, because there is something else that I want to discuss back and forth.

COMPARISON OF MARGIN REQUIREMENTS

But you were here when I asked the Merc people about explaining the way in which one might make a side-by-side comparison of margin requirements, say, on the New York Stock Exchange versus margin requirements or what would be the equivalent of margin requirements in your kind of an exchange and how one sort of understands, given the differences of the two markets, how you make any kind of relative relationship assessment of one to the other. They made the point that they now had adjusted their requirements since October, and I gather that may well be true for yourselves as well, and one of the points they made, apart from the fact that the two markets are fundamentally different was the time period involved setting up by the opening of business the next morning versus having the longer time period for settlement in the other market, and so forth.

I don't want to get into it now, but I would like a more elaborate explanation, to the extent that there are other elements or facts or factors that would help an arm's length observer to put the two markets side by side and the margin element in the two markets side by side and to be able to understand why they are different, as you would see it, and what the reasons are that we—I mean, how one assesses one in relationship to the other, especially because there is this general agreement that the markets now do connect and, in fact, that there is this kind of broad one-world market that has more or less come into being.

So I would like to ask you to do that, if you would, for the record. If we have more time here later, we can get back into that.

Mr. **Mahlmann**. We will do so.

[The following information was subsequently submitted for the record:]

Chicago Board of Trade

Karsten Mahlmann
Chairman of the Board

February 17, 1988

The Honorable William Proxmire
United States Senate
SD-534 Dirksen Senate Office Building
Washington, DC 20510

Dear Senator Proxmire:

I am writing in response to Senator Riegle's question regarding futures margins at the Senate Banking Committee's hearings on February 4. In my testimony, I made the statement that the subject of margins is probably the most misunderstood issue related to the stock market break which you have before you. Because of the importance we attach to margins as a basis of our markets' integrity, we are seriously concerned about the amount of misinformation which has appeared in the press and which has been generated in discussions regarding the October market break. I hope this letter will help clarify the role and operation of the margin system in futures markets.

Essential Characteristics of Futures Margins

There are 5 key points to keep in mind when considering futures margins:

1. Futures margins are a means of ensuring financial performance by the customer on a futures contract. They are not an extension of credit.

2. Futures margins must be paid by all customers, whether they are buyers or sellers, before a transaction is executed. There is no grace period.

3. Futures margins are a component of the futures clearing system. This clearing process implements daily marked-to-market accounting through a sophisticated risk analysis system and close oversight of daily cash flows among the clearing firms. Clearing firms financially guarantee margin payments for all trades. No other type of market has a comparable clearing system.

4. As the daily value of futures positions changes, futures margin accounts must be replenished (or marked-to-market) at least once daily and sometimes more than once when the value of the futures position diminishes. Cash--not credit extensions--must be received by specified times during the day.

5. Futures margin levels are reviewed continuously and revised as often as market conditions dictate. Last year, for

LaSalle at Jackson
Chicago, Illinois 60604
312 435-3601

example, the Chicago Board of Trade changed margin levels over 200 times to ensure that the critical balance between cost efficiency and financial integrity was maintained.

These 5 characteristics of futures margins set them apart from margins in the stock market. Stock margins are not a performance bond; they are an extension of credit. Stock margins are not required to be paid before a transaction; they can be paid up to 7 days after the transaction. Stock margin accounts are not required to be replenished daily if stock values fall. Stock margins are not a component of a daily marked-to-market clearing system. Stock margins are not revised as market conditions change; initial stock margins have not been revised since 1974.

An Example of the Futures Margin System in Operation

An example, similar to the one presented by Chicago Mercantile Exchange Chairman Sandner before your Committee on February 4, will help illustrate the differences between futures and stock margins:

If a portfolio manager purchased one Chicago Board of Trade Major Market Index futures contract on Wednesday, October 14, 1987, he would have had to pay an initial futures margin of $4,500 that day, in advance of the transaction. If, instead of purchasing the futures contract, he had purchased the actual portfolio of stocks comprising the Major Market Index, his initial stock margin requirement would be at the 20-25% margin level for "professional market participants" according to the Brady Commission. However the portfolio manager would not have been required to pay margin until 7 days after the stock was purchased.

The table on the next page shows that over the next 4 days, although no margins were required on the stock portfolio positions, the portfolio manager would have been required to pay a large percentage of additional monies (which increased each day) into his futures margin account. Since his futures account would have been settled daily, he would have been required to pay an additional $4,500 in cash after the close of trading on Wednesday,the 14th, because the value of the contract declined by that amount during that trading day.

All losses in the value of a futures contract must be accounted for at least daily. The margin required on his portfolio of actual stocks as a result of the adverse market move would have been zero. The stock purchase would not clear for 5 more days and stock margin would not be required for another 7 days.

On Thursday, October 15, he would have been required to pay an additional $2,350 in cash into his futures margin account as a result of the price drop that day. The margin required on the actual stock portfolio remains at zero. The stock trade has not yet cleared and will not clear for 4 more days. No stock margin would be required for 6 more days.

MARGIN COMPARISON; ONE FUTURES CONTRACT POSITION OF THE MAJOR MARKET INDEX (MMI) vs. ONE STOCK PORTFOLIO POSITION OF MMI COMPONENT STOCKS

NOTE: One MMI futures contract was purchased on October 14, 1987 at a price of 494.50 points, or $123,625.00.
One portfolio of MMI component stocks equal in value to one MMI futures contract was purchased on
October 14, 1987 at the same price level, 494.50 points.

			Futures Margin Account			Stock Margin Account	
October 14-23 1987	Closing Market Value Of The Position	Daily Change In The Value Of The Position	Accumulated Paid-In Margin At Opening Of Trading	Accumulated Paid-In Margin As A Percent Of The Day's Closing Market Value	Accumulated Paid-In Margin As A Percent Of The Original Purchase Value	Accumulated Paid-In Margin At Opening Of Trading	Accumulated Paid-In Margin As A Percent Of The Day's Closing Market Value
Wednesday	$119,125	-$4,500.00	$4,500.00 1/ *	3.78%	3.64%	0	0%
1. Thursday	$116,775	-$2,350.00	$9,000.00 2/	7.71%	7.28%	0	0%
2. Friday	$111,250	-$5,525.00	$11,350.00	10.20%	9.18%	0	0%
3. Monday	$84,125	-$27,125.00	$16,875.00	20.06%	13.65%	0**	0%
4. Tuesday	$91,125	$7,000.00	$46,500.00 3/	51.03%	37.61%	0	0%
5. Wednesday						0*	0%
6. Thursday						0	0%
7. Friday						Initial Margin Payment Required (Day 7)	

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* Position Cleared; same day as transaction in futures, 5 days after transaction in stock market.

** Cumulative market losses of $39,500 for four days exceed the value of an initial 25 percent margin ($30,906), not required to be paid for four more days.

Loss October 14	$ 4,500.00
Loss October 15	2,350.00
Loss October 16	5,525.00
Loss October 19	27,125.00
Cumulative losses, four days	$39,500.00.

1/ Initial Margin Deposit of $4,500.

2/ $9,000 = $4,500 Initial Margin Deposit + $4,500 loss in value.

3/ Margin requirements increase to $7,000 from $4,500.

On Friday, October 16, a further price drop demands another $5,525 payment in cash into his futures margin account. The required stock margin remains at zero. The stock trade would not clear for 3 more days. No stock margin would be required for 5 more days.

On Monday, October 19, the extremely sharp market break would have required a further $27,125 deposit into the futures margin account. The required stock margin would still be zero and the stock trade would not yet have cleared. No stock margin would be required for 4 more days.

By the opening of trading on Tuesday, October 20, he would have paid a total of $46,500 into his futures margin account, 51% of the value of his position on that day or over 37% of the value of the position based on the original purchase price. At this point, the purchase of actual stocks would still not be cleared and no margin would be required for 3 more days.

Additionally, at this juncture the 32 percent, or $39,500, decline in the value of the stock portfolio would have exceeded the 25% original stock margin call of $30,906. The portfolio manager's stock broker would have reason to be extremely concerned. Even if the necessary margin money was, in fact, received 3 days hence, the account was already $8,600 in deficit.

As the example shows, the futures and stock margin systems function quite differently. The 5 characteristics of futures margins noted previously can be illustrated using the example:

1. Over the October 14 to 20 period the futures margins provided a performance bond for both buyer and seller. Security was provided by the daily collections of funds. No debt was built up. No credit extended.

2. Futures margin was paid before the transaction was executed. Thus, there was the assurance that money was available, even if the market "went against" the portfolio manager immediately.

3. The futures clearing house cleared the futures trade on the day of its execution and oversaw the system of daily marking-to-market. If the portfolio manager had not made his margin payments on time, the clearing member would have had to make all payments, liquidating the portfolio manager's futures and margin account to meet his commitments.

4. The futures margin account was replenished daily. The portfolio manager was contacted daily and was required to deposit the needed funds.

5. The example does not show how the Chicago Board of Trade continuously reviewed the adequacy of the Major Market Index margin levels (i.e., the minimum pay-in-advance levels). However, in response to market volatility, initial margins

were increased from $4,500 to $7,000 on October 21; to $8,000 on October 23; to $12,000 on October 27; and currently initial Major Market Index margins are set at $15,000 which were 15.8 percent of contract value on February 8.

A Comment on Margin Levels

Much has been said about stock margins being generally higher than futures margins. The Brady Report (page 64) recommends that "futures margins should be consistent with effective stock margins for professional market participants." Futures margins are indeed consistent with stock margins, a fact which can be seen by rationalizing the different market functions of the two margin systems. Furthermore, the differences in the levels are not great when one examines the wide range of margin levels applicable to various segments of the securities industry--from as high as 50% to 20% or even lower in some cases. The current $15,000 initial Major Market Index futures margin was 15.8% of contract value on February 8. This is very comparable to the 20 to 25% margins which the Brady Commission's report notes are applicable to stock market professionals. This is particularly true given the far greater stringency of futures pay-in-advance margins and the daily additional collections of margin in cash.

The important difference is not margin level but margin system structure and implementation. The pay-in-advance, pay-as-you-go, continuous monitoring features of the futures margin system combine with 1)the exchange-set price limits ("circuit breakers" in the Brady terminology), 2)sophisticated surveillance techniques, and 3)speculative position limits which limit the leverage any professional market participant can establish through size of speculative position to create a system of margining and financial integrity in the futures markets which is much more conservative in many ways than that of the stock market.

A Comment on the Efficacy of the Futures Margin System and the Threat of Foreign Competition

I hope this letter helps to clarify the role and operation of the futures margin system, and that it helps to clarify the important differences between futures and stock margins. The futures margin system worked well during the October stock market break, as it has for many years. Some of the changes made to margins and associated market mechanisms since October have made the system work even better. For example, in November the Chicago Board of Trade established price limits equivalent to 200 Dow Jones index points for the Major Market Index futures contract. On February 16, price limits for the Major Market Index futures contract were tightened to the equivalent of 100 Dow Jones index points.

As Federal Reserve Board Chairman Greenspan has testified, it would be most costly to change the margin setting system. In addition to increased government resources, significant costs would be incurred if margin setting becomes less responsive to market conditions. Only the futures exchanges, whose business it is to provide fair and efficient markets, of high integrity, have the necessary responsiveness.

Congress has correctly concluded, again and again, that only futures exchanges have the necessary experience and flexibility to set futures margins. The careful inquiry which your Committee and others in Congress are conducting, together with the financial community's own reaction to October, have already led to a number of significant improvements in market mechanisms. As these changes are tested, further refinements may be desirable. Wholesale regulatory changes that reduce flexibility and add cost are of no practical value and will only serve to force business to the Japanese or to other foreign competitors.

The written report we submitted in connection with our testimony before your Committee provides more information on futures margins. (See especially pages 16-23.) If, as you proceed with your inquiry, you find you need additional information about the futures margin system, please contact me.

Sincerely,

Karsten Mahlmann

Attachment

cc: Senator William L. Armstrong
Senator Christopher Bond
Senator John H. Chafee
Senator Alan Cranston
Senator Alfonse M. D'Amato
Senator Alan J. Dixon
Senator Christopher J. Dodd
Senator Jake Garn
Senator Bob Graham
Senator Phil Gramm
Senator Chic Hecht
Senator John Heinz
Senator David K. Karnes
Senator Donald W. Riegle, Jr.
Senator Terry Sanford
Senator Paul S. Sarbanes
Senator Jim Sasser
Senator Richard C. Shelby
Senator Timothy E. Wirth

PORTFOLIO INSURANCE DIDN'T WORK

Senator **Riegle**. I want to go to the issue of portfolio insurance. We have not really discussed that today, but there was a time before late October where portfolio insurance was a very hot product and a lot of people thought, particularly big institutional managers, that this was really the way to be able to successfully lock in gains in the market—I am simplifying—and to be positioned in the event that the market suddenly turned the other way. And it seems to me that what happened, a lot of people found that the portfolio insurance system, in theory, that was supposed to work, didn't work, in fact, because the market came down so fast, buyers evaporated, liquidity evaporated, and to use my analogy of earlier in the day, when the elevator cable broke and people were on the 20th floor and thought they could get out at the 19th or the 18th or the 17th floor, found that they might not get out until they hit the basement or much lower level than they had intended.

And now I find that portfolio insurance is not nearly as hot a product and there isn't nearly as much of it in place as there was, and I guess what I am wondering here is, I would like your perspective on both the belief before the fact that somehow people could successfully exit the market, and without taking substantial losses and the fact that it didn't seem to work in a certain number of cases, and now suddenly the bulk of opinion seems to sort of cut against the notion that you can really successfully protect yourself in that fashion.

Now that is a very oversimplified way to try to present a very complex issue, but within the limits of time, that is what we have to do, but if you would, I'd like your response to that.

Mr. **Mahlmann**. Senator, No. 1, today we have price limits in effect. No. 2, portfolio insurance is really a new word for hedging. It is hedging an inventory. The inventory on one side of a pension fund is owning a basket worth of stock. They now want to hedge that inventory and, therefore, they sell futures contracts against that inventory. That is really what portfolio insurance is.

The driving force that portfolio insurance may have been in the October break was that the amount required to be insured was so vast by these pension funds, that the market had to go through the total break mechanism that it did, at least in part. Today that could no longer occur, because we do have price limits in effect. The Board of Trade price limits that have been established in November, subsequent to the crash and 2 months ahead of the Brady report, would cover that a market can break no more than 200 Dow points.

We will readdress whether that is even too much.

FALLACY OF PORTFOLIO INSURANCE

Senator **Riegle**. I guess the question that follows in my mind, not just the adjustments we have made since, but how in the run up before October, the kinds of sophisticated investors, people that could pay top dollar in this country that manage these big portfolios, could have convinced themselves that there, in fact, could be a successful hedge of that kind in place and that everybody, more or less, that was involved in those transactions would have thought so, because that is what was happening. And then all of a sudden, we found that when the market began to cascade and break, that it overwhelmed that notion and overwhelmed a lot of those decisions that very smart people had made in advance of that market break, and now in the aftermath of it, we are looking back and Monday morning quarterbacking and saying, yes, it was not—it's not wise. It's not sound to not have some way in here to break these falls when they come or to have some limits.

But my question goes back to the earlier period, and I am still trying to understand why so many savvy people, and I am talking about the heavyweights. I am not talking about the little shareholder that got crushed in the rush to the door. I am talking about the big shooters that manage billions of dollars worth of capital assets, could not have foreseen the fallacy in that kind of approach. I mean, how could the market break against the logic that it would have allowed, in a sense, prices to rise in the theory that people were really protected against some kind of a shortfall.

Mr. **Mahlmann**. I don't know whether the price rose on the theory that I could protect myself. I think there have been studies made that derivative products enhance the capital formation process, because there is insurance available, but when all people at the same time want to go through the same door, and you talk about the billions of dollars that the investment and pension funds now manage, when all of those billions want to come through the same door at the same minute, that offsetting liquidity is not there in even connected markets. And when you look at the day in particular, you had markets, as Senator Brady reported, in disconnect. There were 80-some percent of the Dow Jones stocks that did not open on Monday for the first hour. Futures markets were the only instrument open. They had to take that brunt of everybody coming through the door.

So you had disparities that were created by the whole euphoria that was mentioned here this morning, overnight coming to a halt and not coming to a halt just in the United States, but coming to a halt on a global basis.

Senator **Riegle**. Well, I guess, I am testing the logic in my own mind. These are very complex issues, and I am not sure that anybody fully understands them. And so we are all attempting to do that as best we can, but it seems to me that—if you start from the proposition that most of the transactions today are by big institutional traders, the great volume that is done either on the basic exchanges or the derivative exchanges is—comes from those customers, that on the front end, in terms of the sharp run up in values, I suspect, logic suggests to me that the belief that people could hedge themselves sufficiently—I am talking about these big traders that have been dominating the process now for quite a period of time, portfolio managers and pension managers, particularly, I think the belief that somehow or another, they could sufficiently hedge themselves and get through the door first or get through the door without a windfall collapse in values was, in fact, probably part of the psychology that caused values to rise as much as they did. I can't prove that, and I may not be right in saying it, but the logic it seems to me suggests that there is something to that. And you can sort of test that by saying that post-crash, all of a sudden, the notion that people can hedge themselves sufficiently here in the volumes that they were, that portfolio insurance is not nearly as healthy a business today—I don't suggest that you are in that business, but I am saying that people who principally draw that activity are finding that they are running a much smaller business these days; isn't that correct?

Mr. MAHLMANN. Senator, I would submit to you that the bullish sentiment euphoria was more bullish in countries than the United States, in other countries and in countries that did not have the perception that I can go get this insurance or portfolio insurance, because they didn't have derivative instruments. So I think the bullish euphoria was universal, and the disenchantment came overnight.

Senator RIEGLE. Well, of course, the Japanese market hasn't broken quite the way ours has broken, has it?

I am talking about, where we are today versus pre——

Mr. MAHLMANN. They have come back a substantial amount from their break that occurred on October 20, but they started in reaction to our Friday night preceding Black Monday, that they had a terrible Monday. That was then subsequently transferred to Hong Kong, subsequently to London and wound back up here.

Senator RIEGLE. I think that is a good point, but I don't think you would want to suggest—maybe you do—the Japanese market has come down net, the same percentage, roughly, as the American market has, since the market broke.

Mr. MAHLMANN. I am not saying that, but they climbed to greater heights even than we did, and they did not have the so-called "safety net," if that was the perception that portfolio insurance was available, because they do not have a stock index contract. They now have declared that they will bring one on.

Senator RIEGLE. All right. My time is up, and I know Senator Dixon is very anxious to have his turn.

I want to say, as the chairman did, that I thought your statement was a particularly thoughtful one today and a helpful one to us.

Senator DIXON. Thank you, Mr. Chairman. Mr. Mahlmann and Mr. Donovan, I want to make a point and then ask a question.

The first point is this. I regret that my friend, the chairman, is not here. I think we view in a little different context what happened in respect to the Continental, but the fact is, in the first day or two in that very serious crisis, three Federal agencies cooperated together beautifully and provided the liquidity that ultimately put in place the system that saved the Continental and a great deal of integrity in the banking system in this country, and thereafter, clean up work took some time, as it will anytime a great occurrence of the magnitude of the Continental or your experience on October 19 and October 20 takes place.

But I think the point that some of us will contend is important here is that the CFTC and the SEC are in place. Everything indicates that they have done their job well over the years and are entirely competent people. So that it would be the argument of this Senator, and I hope that the ultimate conclusion of the majority of this committee that we don't need another agency that does not exist. We don't need to pile another bureaucratic idea on top of everything already in place, that the CFTC and the SEC working with the industry, the New York Stock Exchange and the futures industry can make the necessary types of reforms that are required.

Again, I would repeat to you, nobody seems to question the fact that there is merit in suggestions one, two, three, and four in the priority list of Senator Brady. A clearing and credit mechanism, one. Margin requirements should be addressed, two. Circuit breakers should be looked at, three, and better information systems for a one market system, four, should be examined.

And so I would like to ask you, Mr. Mahlmann, are you and Mr. Donovan, at the Board of Trade, prepared to talk to Mr. Melamed at the Merc and Mr. Phelan in the New York Stock Exchange, Mr. Ruder at the SEC, Mr. Hineman at the CFTC and others, to put in place the discussions that ultimately will seek a resolution of these concerns?

Mr. MAHLMANN. Senator, in our testimony we submitted today, we did indicate that we have already offered to the New York Stock Exchange, in the spirit of cooperation, an audit trail information system that we have developed, we strongly believe, in order to come to a meaningful conclusion, that it has to be the basis for drawing such conclusions. And we are willing, ready, able, and committed to sit down at the table tomorrow.

Senator DIXON. Good. And may I suggest to you that tomorrow is none too soon, and that the discussion should begin, because at some point in time, the chairman will call us back here, either for a markup or further review of what has transpired, and at that time, I would hope that we are all prepared to look at what has been done and to have some reports, Mr. Mahlmann from you and Mr. Donovan and Mr. Melamed, and a lot of other people, and from Chairman Ruder and Chairman Hineman, about what is going to be done in these four areas of grave concern.

Mr. MAHLMANN. We are ready to go to work, Senator.

Senator DIXON. Then I am in a position, as the acting chairman, to recess this committee hearing.

And I thank you both for your testimony.

Mr. MAHLMANN. Thank you very much.

[Whereupon, at 1:30 p.m., the hearing was adjourned.]

"BLACK MONDAY," THE STOCK MARKET CRASH OF OCTOBER 19, 1987

FRIDAY, FEBRUARY 5, 1988

U.S. Senate,
Committee on Banking, Housing, and Urban Affairs,
Washington, DC.

The committee met at 10 a.m., in room SD-538, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Graham, Wirth, Heinz, D'Amato, Bond, and Chafee.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The Chairman. The committee will come to order.

This morning we continue our hearings with Mr. John Phelan, the chairman and chief executive officer of the New York Stock Exchange. As the head of our largest self-regulatory organization, Mr. Phelan, you will be called upon to take the lead in suggesting improvements and to induce the members of your exchange to adopt them.

The specialist system on the New York Stock Exchange has been heavily criticized in the wake of the October 19 situation.

The Brady Commission published data showing that at the close of business on October 19, 10 percent of the New York Stock Exchange specialists in 50 large capitalization stocks had short positions at the close of business. On October 20, 36 percent had short positions.

Now I agree with those who say that no dealer system could have absorbed the shocks experienced in those 2 days, but the Brady Commission and data suggest that some of your specialists who have the obligation to stabilize markets were actually exacerbating the market decline by selling short when the market was falling.

I hope that the New York Stock Exchange will take appropriate enforcement actions to restore and maintain a high level of integrity and effective performance among the specialists. You know the business. You know it well. You are well qualified to oversee it. But the "self" in the term self-regulatory organizations is justifiable as a social structure only if you regulate your markets in an efficient and fair manner to enhance and maintain the trust and confidence of investors.

Senator Heinz.

OPENING REMARKS OF SENATOR HEINZ

Senator HEINZ. Mr. Chairman, I'm glad that John Phelan is going to testify. As you and others have remarked, he sits in a critical seat, sometimes it's been a hot seat. It could get hotter, but I'm confident that we will get some interesting and good advice from Mr. Phelan today. Clearly, we would like to find out his advice on how the issue of portfolio insurance and program trading strategies might be better handled.

I am interested in his reaction, of course, to some of the specifics of the Brady Commission report, not the least of which is a mechanism that would harmonize the setting of margins, and I hope that in that discussion we can also talk about what kind of actions we might consider or might not consider if they are going to impact the competitiveness of U.S. financial markets from a worldwide standpoint.

So I will abbreviate my statement and leave it at that.

The CHAIRMAN. Senator Wirth.

OPENING REMARKS OF SENATOR WIRTH

Senator WIRTH. Thank you, Mr. Chairman.

Mr. Phelan, I'm delighted to have you here and we certainly appreciate your careful stewardship of the New York Stock Exchange.

I'm particularly curious this morning to hear you address, if you can at some point, your perspective on what we ought to be doing on implementing various regulatory mechanisms. If there's some way we can begin a process of at least examining how should those be more carefully coordinated and how quickly should we be doing that? I'm delighted to have you here.

Mr. Chairman, it's another one of your good hearings. Thank you very much.

The CHAIRMAN. Thank you, Senator Wirth.

Senator D'Amato.

OPENING STATEMENT OF SENATOR D'AMATO

Senator D'AMATO. Mr. Chairman, I'm pleased to welcome a friend of long standing and a neighbor from not only New York but from Long Island to the committee, and publicly thank John Phelan for his performance during the events of Black Monday and Terrible Tuesday. During these turbulent trading days, John Phelan was a symbol of calm and stability and I'm sure his deportment during the crisis had a positive effect on his colleagues and on the market in general. I sure hate to think of what it would have been without his steady hands at the control.

In recent weeks and during these hearings, the New York Stock Exchange has been the target of some criticism, some I think quite unfounded. In their reports, these critics have pointed out some inadequacies in the New York Stock Exchange's trading system.

However, before we too quickly criticize the New York Stock Exchange, we must judge the performance of its members in the proper perspective. Despite the unprecedented levels of trading and volatility that the market experienced on October 19 and 20, the New York Stock Exchange stayed open and the system worked. It may have come precariously close to the so-called meltdown, but it worked.

This is a system, Mr. Chairman, which was designed to trade a maximum of 500 million shares and I daresay had never traded anywhere near that. Maybe its record had been in the area on one or two occasions of 250 to 300 million shares. Suddenly, it was deluged with over 600 million shares that changed hands in 1 day. Now how could anyone ever have predicted an explosion of trading? Despite this, the system held together.

Now further, in both public and private statements during the last year, it was John Phelan who warned this Member and the Securities Subcommittee of the dangers of program trading. So it's not as if he has come totally oblivious or did not attempt to say we've got to look at this; it presents some possible problems and maybe hazards. Regrettably, those dangers were realized on October 19 and 20.

Now rather than take the "I told you so" attitude and walk away from the problem, John Phelan urged the members of the New York Stock Exchange to adopt voluntary curbs on program trading and the board of the New York Stock Exchange voted yesterday to make those voluntary restraints permanent.

I want to commend you for your action in that area. The decision to impose restrictions on program trading are precisely the type of response to the crash which should make congressional intervention unnecessary or certainly limited.

Hopefully, the other self-regulatory organizations will follow the New York Stock Exchange's lead and begin to implement some of the reforms that are necessary and that have been cited as reasons to exacerbate that plunge.

Now I believe it's silly to talk about the need for circuit breakers such as price limits when most of the experts agree that much of the market volatility occurred as a result of other areas. And more experts than not have testified that if we put in the so-called circuit breakers as called for what we might very well do is precipitate in a downward market that we guarantee the market will drop to that level, in many cases going far beyond what it would ordinarily do if left to the law of supply and demand in the market forces in a free market.

If volatility is a problem, then curbs on program trading seem to be a far more appropriate response than price limits. The New York Stock Exchange is again to be commended for its leadership in providing concrete solutions to systematic deficiencies revealed by the market break. Such a curb on market volatility will result in a boost in investor confidence.

The exchange's actions demonstrate the proper implementation of the concept of self-regulation. Now it's incumbent upon our regulators and the other exchanges and the other self-regulatory bodies to undertake the same kind of actions that the New York Stock Exchange has been undertaking.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator D'Amato.

Senator Bond.

OPENING STATEMENT OF SENATOR BOND

Senator **Bond**. Thank you, Mr. Chairman.

I join with my colleagues in welcoming Mr. Phelan and later on Mr. Fogel before this committee.

We are most interested to hear what you have to say and to learn from your experience, as we've learned from others with similar responsibilities in the past several days.

Mr. Phelan, I would like to offer you the same encouragement that we offered Mr. Melamed and Mr. Mahlmann yesterday, to try to do what you can working cooperatively with the other bodies involved to make the necessary changes in the markets without congressional action.

We are willing, I think, if it's absolutely necessary, to move legislation in areas where changes must have congressional approval, but we would hope to the greatest extent possible that this process could move along with the effort of the New York Stock Exchange and by the other markets.

I am fully confident that you have the same dedication and the same commitment to seeing that the market machinery works well. I would only echo one comment made by our colleague from New York that the market came perilously close to meltdown. I am also very much concerned by what Senator Nick Brady said, that there still are dangers that significant market disruptions could take place if changes are not made. So I do not believe that we can say that all things are going to be all right and the only thing we need to do is get away from using computers to execute trades; if we all went back to a pad and pencil or maybe carved orders on stone tablets, it would slow down the market so nothing would happen. We would encourage you to work with your colleagues in Chicago and the other exchanges to see how the markets can be improved.

Finger-pointing and blaming one another is one thing that Senator Brady warned against. We have to see cooperative efforts among the markets to deal with the problems they all have encouraged.

Unfortunately, we in Washington have not set a very good example. One of the great problems you have, as my colleague from Texas mentioned the other day, is that Congress and the administration have not done a particularly good job of responding to the problems in our own economy. We spent more time blaming each other than working together to settle those problems and I would encourage you not to follow our example; do what we say, not what we've done.

We look forward to hearing from you, sir.

The **Chairman**. Before we start I have a statement from Senator Sasser to be inserted at this point in the record.

STATEMENT OF SENATOR JIM SASSER

Mr. Chairman, I want to thank you for holding this week of hearings on the October crash—they have been enormously informative and, I think, give us a better idea of where we go from here.

Today we hear from John Phelan of the New York Stock Exchange and Richard Fogel of the GAO. Mr. Phelan and his exchange worked through unprecedented volume and volatility on October 19 and 20. On October 19 the exchange traded 604 million shares—three times their average daily ~~volume. And~~ it did stay open.

Mr. Phelan, can tell us more this morning about the exchange's decision yesterday to limit index arbitrage whenever the Dow swings by more than 50 points.

Moreover, Mr. Chairman, I think it is most appropriate that we began these hearings with Senator Brady and end today with the GAO. I think that their two respective reports on the crash are the most objective, thorough and comprehensible studies that have been put before use.

Indeed, I think the recommendations of the GAO report make a lot of sense, maybe they make too much sense. Who can argue that the regulatory agencies and the SROS should have contingency plans? We know that only the Fed had one in place prior to the crash. Obviously, the Fed's actions during and after the crash reflected it.

If the public knew that such plans existed; that the regulators and exchanges would act in a coordinated fashion; and not on an ad hoc basis as the GAO found occurred during the crash; it would do much to restore confidence in the financial markets. Thank you, Mr. Chairman.

The **CHAIRMAN.** Chairman Phelan, you have an excellent statement, but it's quite detailed. Would you be able to present it in 10 minutes?

Mr. **PHELAN.** I will not read the statement. I will just go over a few points and then answer any questions you may have.

The **CHAIRMAN.** Fine. Your statement will be printed in full in the record. Go right ahead.

STATEMENT OF JOHN J. PHELAN, CHAIRMAN AND CEO, NEW YORK STOCK EXCHANGE

Mr. **PHELAN.** Again, I thank you, Mr. Chairman and the committee, for having me here today. I appreciate the comments of Senator D'Amato, Senator Heinz, Senator Bond, and Senator Wirth.

A SINGLE MARKET

I think I would like to start out by merely saying that in all the reports and all the statements everybody has talked about a single market. And, I think we are heading toward a single market.

In some ways we are a single market but in some ways we are still separate. Not only by linkages and not only by products, but also by customer use as well. As you will notice in my statement that the New York Stock Exchange did a survey having nothing to do with the Brady report of about 300 major institutions representing about $1 trillion and of those, only about 9 percent were using derivative products. The universe is narrow, but I think if we had done that survey 2 years ago, less than 1 percent would have been using such products. So the growth in the use of these products in a very short period of time is what we should be looking at and if we are not a single market, we are certainly moving very rapidly in that direction and we have to face up to that fact.

Second, as to all the reports, the one that is of particular interest to us is the SEC report because they are our regulator, and there is nothing in that report that we disagree with. We will work with the SEC. We will form a working group to see almost immediately if we can't get together to resolve any minor differences we may have and begin to implement the things that we can do in our own market.

In that report, we agree with their statement that on the whole the specialist system behaved reasonably well. There were some marginal problems and we agree with that statement as well. We have taken action in several cases to reallocate stocks. We probably have some more of those cases coming up and we are considering other disciplinary actions as well.

We also think that we need to reinforce the specialist capital system and we're looking at ways to do that. We also think that reallocation is a good enforcement tool and a good prod and incentive tool because there's nothing like hitting people in their pocket, and I think we will use that tool much more aggressively today and in the future than the exchange has used it in the past.

While we have some differences with the Brady report having to do with the staff analysis of specialist performance, we believe that overall the recommendations are well thought out and make sense and we agree in general with their concepts.

About regulation, I'm not sure whether you can get third party regulation or whether you need a single regulator, but in any case, you should move toward a single regulator. An independent authority to study the allocation of credit in the system also makes sense.

We support the strengthening of clearing corporations. We have talked about circuit breakers before and I think we need to have more intermarket cooperation. We've shown we can do that in the equity markets because we have the intermarket trading system and the intermarket surveillance system, and we certainly can do that with futures as well. Of course, I think the sharing of information and understanding a lot more about what goes on in the market is going to be of great help to us.

The systems—I did not cover except to say that it was an enormous task to keep the markets open. We think that most of the time the great majority of our systems did what they were supposed to be doing. We reached capacity in three or four systems. We think that the problems were marginal and not endemic to the system. We think if it happened today we would process 600 million shares with almost no problem at all. We absolutely think by June there would be absolutely no problem with doing that and we've got to get on to preparing for greater volume and greater capacity, which we can come back and talk to later.

What we're really trying to do is to balance the traditional purpose of the equity markets, which is to have listed companies and new emerging companies be able to raise capital in an efficient way so that they can invest in plant equipment and services and contribute to a higher standard of living in this country and a better quality of life. We also have the other purpose of the market, which is asset management, which has traditionally been done on a valued or a semi-valued basis. There are other uses of the market, such as finding ways to shed or try to hedge against risk. In doing that have created new products and market linkages. And out of that has come an enormous speculative surge not only by professionals but by institutions as well. I think the Brady report said 10 or 12 institutions were the basic sellers on that day. The SEC report cited one major institution.

If in fact the 10 or 12 major institutions were to spread to 50, the problems with volatility, the problems with liquidity, the problems with capacity in the system are almost undefinable at this point in time. There must be a balance in the market between the capital raising mechanism and liquidity of the market, and the asset management function. You can have the speculation which you need to provide some liquidity, but the speculation must not drive everything else out of the market per se.

Last, I would certainly endorse what the Brady Commission and what the SEC has said, that we do need cooperation and coordination between the different market places. In our report we urge that the SEC and the CFTC get together immediately with ourselves and with the other equity markets plus the futures markets, and sit down to talk about common problems and how to solve them.

So I thank you again, Mr. Chairman, for having me here this morning.

[The complete prepared statement of John J. Phelan, Jr., follows:]

TESTIMONY SUBMITTED FOR THE RECORD BY
JOHN J. PHELAN, JR.

CHAIRMAN AND CHIEF EXECUTIVE OFFICER
NEW YORK STOCK EXCHANGE

BEFORE
THE U.S. SENATE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

FEBRUARY 5, 1988

WASHINGTON, D.C.

Mr. Chairman, members of the Committee:

On behalf of the New York Stock Exchange, I appreciate the opportunity to appear at this hearing.

My purpose today is to give you the perspective of the New York Stock Exchange regarding the events leading up to and including the week of October 19th, 1987.

I also want to offer some comments regarding the Securities and Exchange Commission's report on the October market break, the report of the Presidential Task Force on Market Mechanisms and the General Accounting Office's preliminary observations on the events of last October.

These studies reflect a great deal of time and effort and deserve serious consideration.

And finally, I'd like to share my thoughts with you about where our equities markets are headed and in which direction I think they should be going.

But before I do all that, I want to provide a basis for my comments by giving you a brief background of the New York Stock Exchange.

The New York Stock Exchange has a varied and broad-based constituency made up of 650 member firms, 1,600 listed companies, 13,000 institutional investors, and more than 125,000 Registered Representatives.

In terms of the investing public, there are 47 million Americans who are direct shareowners in America's corporations, 70 percent of whom hold NYSE listed stock, while 47 percent hold only NYSE listed stock.

Another 140 million people are indirect shareowners through insurance companies and pension funds for a total of 187 million direct and indirect shareholders -- all of whom have a common interest in preserving the fairness and orderliness of our equities markets.

In other words, the NYSE is a market with many constituencies and deeply planted roots in the American economy.

Working with and on behalf of our multiple constituencies, the role of the NYSE is to:

> Promote the capital-raising process by maintaining an open, fair and liquid marketplace under normal conditions for the issuance and trading of securities;
>
> Provide investors -- large and small -- with a vehicle for managing their assets through investment; and
>
> Promote effective self-regulation of the market and market participants for the protection of investors and the integrity of the marketplace.

Given that brief profile of who we are and what we do, let's take a look at the week of October 19th and what it meant for the Exchange.

An analogy to help put the NYSE's performance into perspective would be to compare the market to a skyscraper standing erect in the midst of a hurricane with winds reaching in excess of 150 miles-per-hour.

As long as the building withstands that kind of strain, most people are gratified even if the lights flicker.

In a sense, that's what happened to us. We were hit by a financial hurricane of enormous proportions the week of October 19th.

Of course we had problems. But the problems were at the margin, affecting only about 10 percent of our business.

The fact is, we kept our marketplace open and all the individual components of our market -- including our systems and those of our member firms -- functioning so as to provide an investment arena where the smallest and largest users were afforded the opportunity to have their trades executed.

The hurricane that hit us that week -- like any other hurricane -- was the product of several different atmospheric conditions, some more important than others.

The most important of those conditions was the general perception that the market was overvalued.

It was this perception of the market being overvalued -- along with a growing concern over higher interest rates -- that was the catalyst for the storm.

The view that the market had peaked increased the overall level of investor anxiety. As a result, the marketplace became especially sensitive in October to bad news about a variety of troublesome issues. Issues that had been on the public mind for a very long time, but that hadn't affected the market previously.

Issues such as inflation, recession, trade and budget imbalances, debt levels, protectionism and tension in the Persian Gulf, to name just a few.

Which -- if any -- of these issues actually instigated the market break is beside the point.

The critical element was the public perception that the market was overvalued and thus susceptible to a correction.

Whatever element -- or combination of elements -- that set off the correction did so like a hurricane that ripped through our market.

Here are some facts and figures to demonstrate just how strong that hurricane was.

The total NYSE share volume for October 19th through the 23rd was 2.3 billion shares -- or almost as much business as we did all of 1967.

On October 19th, NYSE volume was 604 million shares, more than three times our average daily volume for the year.

The very next day -- Tuesday, October 20th -- we hit a volume of 608 million shares and followed with three more days of extraordinarily high volume without closing.

From January to September 1987, the average number of trades each day was 87,000. In contrast, on October 19th and 20th, there were more than 200,000 trades per day.

In terms of orders, the average number of systems orders received from January to September 1987 was just under 144,000, or 6.1 orders per second.

On October 19th, we received 470,000 orders, or 20.1 orders per second. And on October 20th, those numbers were 585,000 orders received at a rate of 25 orders per second, or four times our previous daily average.

In 1987, program trading orders in our Designated Order Turnaround System, known as SuperDot, averaged about 15,000 per day between January and September. (A description of SuperDot is attached.)

On October 19th, over 61,000 orders were received on the NYSE trading floor through SuperDot. That's four times the usual number of program orders.

These figures regarding program orders probably are understated because of the way orders are marked.

Indeed, according to the Presidential Task Force on Market Mechanisms, index arbitrage programs and straight sell programs accounted for almost 20 percent of the sales on our trading floor on October 19th.

We, too, believe the numbers of program orders are higher and need to improve our marking of orders in the future.

Should we have been able to predict this kind of activity, and should we have planned for it better? To ask the question another way, was our planning at fault.

I believe the answer is "No."

Prior to October 19th, our planned peak in volume -- otherwise known as the theoretical limit -- for the NYSE and our member firms was between 420 million and 450 million shares, or more than two and one-half times our average daily volume up to that period.

And even at that, there was plenty of skepticism within the industry that we would ever experience a 450 million share day -- much less a 600 million share day -- before 1990.

Yet, despite that skepticism, we developed a five-year plan to increase processing capability to handle peak loads of 450 million shares in 1987, and 600 million shares in 1990.

Moreover, after we hit a then record volume of 303 million shares on January 23rd, 1987, we went back and took an even closer look at our systems, and invested several million dollars more to accelerate improvements in our capacity.

These are a great many figures. But they're important because I believe they demonstrate that in light of the kind of market activity we had seen prior to October 19th, our planning process was reasonable and responsible.

I want to underscore, too, that even though our volume projections did fall short of the 600 million share days we actually experienced, it was the elasticity of processing capability embedded in our planning that enabled us to handle last October's volume.

That elasticity of processing capability -- combined with emergency measures we instituted during the week of October 19th -- got us through a storm of unpredictable proportions.

Some of those emergency measures are part of our basic contingency plan.

For example:

Our fundamental premise during any kind of emergency is that we do everything possible to keep the Exchange open and functioning. That was the premise we operated on when October's financial hurricane hit.

We also allowed the dealer system additional time to open securities and provide for trading halts and indications of interest where there were large imbalances.

We opened our electronic order delivery systems beginning on October 19th at 7:30 a.m. rather than 8:30 a.m.

And we maintained communications liaison with the Securities and Exchange Commission.

As I said, all these steps are part of our basic emergency operating procedures.

What we did in October was to expand on these measures by setting up additional communications links with the White House, Congress, the Federal Reserve, the Treasury Department, member firms, regional exchanges, NYSE board members and key industry executives.

We also freed-up our system's capacity for public and institutional investors by requesting that our member firms refrain from using our automated order delivery system for entry of program trading orders -- specifically those program trading orders having to do with index arbitrage. And that they refrain from doing that kind of trading for their own account.

From previous examinations that we had done, we knew index arbitrage trading utilized some 15 percent of our capacity.

By eliminating it from our systems, we were able to make that capacity available to public and institutional investors.

At the same time, there were several institutions trading through one major member firm that experienced significant problems, and we currently are examining these situations.

Nevertheless, as a result of our efforts, to quote Robert Glauber, executive director of the Presidential Task Force on Market Mechanisms, in a January 18, 1988 interview in Barron's, "The Big Board held together." And as Mr. Glauber went on to point out in that interview, the NYSE did so despite the fact that we weren't configured to handle anything like the volume we actually experienced.

In a January 15, 1988 letter to the NYSE from Benjamin F. Edwards the 3rd, chairman of A.G. Edwards and Sons, Inc., a member firm whose business primarily is retail, Mr. Edwards stated that "Overall, (his) customers were able to obtain executions for record numbers of orders through the facilities of the NYSE." And that A.G. Edwards "believes the great majority of (its) clients, who were investors, felt that they were reasonably served under extremely difficult conditions." (A copy of the letter is attached.)

It should also be noted that in a survey of 302 institutional investors -- representing almost one trillion dollars in assets -- and 294 individual shareowners taken by the Exchange after October's market break, both groups were asked to compare the NYSE's performance with that of a wide range of institutions, including the London and Tokyo Stock Exchanges.

Both institutional and individual investors alike rated the NYSE's performance second only to that of the Federal Reserve.

We are proud of these findings. But, as I said earlier, we did have some problems. By that I mean that in addition to delays that took place at our member firms, the NYSE experienced delays in our delivery and reporting mechanism for market and limit orders.

While those delays taken on an individual basis were significant, they were minor when viewed in relation to the total system traffic that we experienced.

Regarding the delays, by October 20th -- when we hit 608 million shares -- our systems showed improvement. And by the 21st, even though we still were experiencing extraordinarily high volume, our systems showed significant improvement.

In short, in a period of only 48 hours, we adjusted to volume levels that were more than three times our daily average. No other system in the world can make that kind of claim.

To put it another way, the events of October 19th should not be taken out of context. The conditions we faced were extraordinary in the extreme. It's true we had difficulties. But it's also true that our achievement was unsurpassed.

As a result of the October market break, there was a lot of attention focused on the issue of comparison and settlement.

Following the execution of a trade, brokers for both the buyers and sellers submit the details of the trade -- such as price and number of shares -- for comparison and settlement.

It is important to note that the NYSE is able to tell any customer who questions a trade whether or not there was a delay in the stock at the time the order was placed, and if there was a delay, at what price range the customer can expect the trade to have been executed.

It is also important to note that uncompared trades involve settlements between brokers and not public customers. And that all confirmed public transactions were cleared and settled within the normal 5-day settlement cycle.

Following the market break, a lot of concern also has been expressed that as volume continues to grow and the use of index arbitrage increases, professional trading may at times crowd out public trading -- whether it be individual or institutional.

While that did not happen during the week of October 19th, it is a complex problem that needs to be closely examined.

The NYSE has never before discriminated between one kind of order over another, but to the extent that there is a potential for such crowding out, we are considering all the options available to us to deal with the issue.

SPECIALIST SYSTEM

Much of what I've discussed so far involves electronic systems. But our systems are more than just electronic.

One of the important human elements is the specialist.

The fact is, during the market break of October 1987, the specialist system performed better than any other system across the country or around the world.

Indeed, Nicholas Brady, Chairman of the Presidential Task Force on Market Mechanisms, in a January 12th, 1988 interview in the New York Times said of the specialist system -- in much the same way that Churchill said of democracy -- that while it's not the best system, "it's the best we've invented."

Also, the SEC in its report on the market break stated that: "Although there were some instances of questionable individual performance...specialists as a whole met their market making obligations."

In my view, that's saying a great deal in favor of the specialist system, especially when it's said by people charged with investigating the market break.

Our evaluation of the performance of our specialists did surface some cases where Exchange standards were not met.

In two such cases, the NYSE took away the stocks of Gould and Company and J.P. Morgan and Company from the specialists firms M.J. Meehan and Company and Spear, Leeds and Kellogg, respectively. In both instances, the NYSE reallocated the stocks to other specialists.

We expect more disciplinary actions resulting from the week of October 19th, and when appropriate, additional stocks will be taken away from other specialists that failed to meet Exchange standards. For we agree with the Securities and Exchange Commission that reallocation of stock is an effective tool in improving specialist performance, and we intend to do more of it in the future.

Nevertheless, overall the NYSE specialist system performed the way it is intended to perform. And we believe the reason it did so is because our specialists have an assigned responsibility. (The NYSE specialist job description is attached.)

How well NYSE specialists fulfill their assigned responsibility is determined by evaluating their performance against a particular set of standards. Indeed, the NYSE is the only market with specific standards for judging specialist performance.

These standards have been in place for many years. They have been reviewed and approved by the Exchange board of directors as well as filed with and approved by the Securities and Exchange Commission (SEC). Moreover, the Exchange annually discloses the performance of the specialist system based on these standards.

What are some of those standards, and how did NYSE specialists perform in the face of the financial hurricane that hit the market in October?

One is the specialist participation rate.

The specialist participation rate measures the number of shares a specialist buys and sells as a dealer for each stock assigned to him, and expresses that participation rate as a percentage of total shares bought and sold.

On October 16th, 19th and 20th, the specialist participation rate for all specialists was 13.1 percent, 17.5 percent and 18.1 percent, respectively, compared to 11.7 percent for the first nine months of 1987.

What this shows is that specialists' purchases and sales for their own account during October 19th and 20th increased substantially at a time when market volume was more than three times the previous daily average.

Another measure is the stabilization rate.

The stabilization rate measures the percentage of purchases and sales made against the trend in the market by a specialist in each of the stocks assigned to him. The higher the percentage, the better.

The specialists' stabilization rate for all stocks on October 16th, 19th and 20th was 91 percent, 94 percent and 94 percent, respectively.

In comparison, the stabilization rate was 90 percent during the first nine months of 1987, clearly indicating that on all three October dates, the specialists' dealings against the trend of the market were consistently better than the average experience for the period leading up to the market break.

A third standard is quotation spread.

The quotation spread is the difference between the price at which a stock is bid and the price at which it is offered. The narrower the spread, the better.

While the quotation spread widened somewhat as would be expected during the period under review, principally with one-eighth point spreads declining and one-half point spreads increasing, compared to performance during the previous September, trade-to-trade variations -- otherwise known as continuity -- compared favorably.

Continuity reflects the change in price from one trade to the next. The more liquid a stock is the more it trades at minimal price variations.

For October 16th, 19th and 20th, there was no change in price between one sale and the next 57 percent, 50.6 percent and 46.4 percent of the time, respectively, compared to 57.9 percent of the time for the preceding month of September.

There was one-eighth of a point change in price between one sale and the next 29.4 percent, 22.6 percent and 20.5 percent, respectively, compared to 32.8 percent of the time for the month of September, clearly indicating a liquid market for the period under review.

And finally, there's the standard known as market depth.

Market depth extends the concept of continuity to a sequence of trades, reflecting actual change in price on each 1,000 shares of volume. The more volume that occurs at no change or at a small variation, the better the depth of the market.

Examining the standard of market depth, the figures compare favorably with the continuity figures, with no change in price variation per 1,000 shares of volume 52.9 percent, 47.2 percent and 42.4 percent of the time on October 16th, 19th and 20th, respectively, compared to 52.9 percent of the time for the entire month of September.

What all this suggests is that when evaluated against well-established, proven measures of specialist performance, NYSE specialists did a commendable job in the midst of extremely volatile market conditions never before experienced.

That, too, was the conclusion of Peter T. Buchanan, President and Chief Executive Officer of the First Boston Corporation, a major member firm, who in a letter to the NYSE, dated January 29, 1988, wrote that "the specialist community did a commendable job in extraordinary circumstance...." (A copy of the letter is attached.)

It is interesting to note at this point, that following the events of October 1987, the National Association of Securities Dealers is beginning to institute standards for dealer activity similar to those we've had in place for years.

In examining specialist performance for the period under review, the the issue of capital adequacy of specialists has been raised.

Specifically, would the condition of the market during the week of October 19th have been better than it was if specialists had more capital?

Simply stated, the answer to that question is "No."

The Brady Commission itself stated in its report that "no realistic amount of capital could have stemmed the tide of the October break...."

We agree with that conclusion.

Additional capital during the October market break would only have led to more selling at prices above equilibrium.

The fact is that the specialist is not the buyer of last resort. Dealers can't hold markets up; they can only cushion them. Specialists aren't in the marketplace to prop up the price.

Rather, they are there to help make sure whichever way the market moves, it does so in an orderly fashion depending on market conditions. And no amount of capital would have enabled them to do more during the week of October 19th.

Nor should we have expected them to do more.

Dealers are not nor should they be required to stand in front of a roaring financial "locomotive." To demand that they to do so clearly would jeopardize the the existence of the dealer system. And that would serve neither the interests of the dealers themselves nor the interests of the investing public who rely on a continuous auction market.

Taking a longer term view beyond the specific events of October 19th, the conclusion is equally as clear that as we move toward one market and volume, volatility and risk increase, pressure on the specialist system will intensify.

That means that over time, we must strengthen the specialist system.

The way to do that is by:

Increasing the amount of capital in the system;

Enhancing the buying power of specialists by improving their ability to borrow money; and

Taking stocks away from those specialists who fail to meet Exchange standards.

We intend to take all these steps to make what we believe to be the best dealer system even better.

While we agree with the Brady Commission's conclusion regarding specialist capital during the week of October 19th, we disagree with the Commission's use of net buying and net selling activity over half-hour intervals as a standard for measuring specialist performance.

No equities market system anywhere judges dealer performance by such a standard. Quite simply, it ignores the minute-to-minute shifts of supply and demand, and obscures the extent of a dealer's contribution to market continuity and depth.

In our judgment, it's absolutely necessary that a dealer be allowed to reliquify at all times during the day. So rather than net buying and selling, the important measure is the number of times a dealer moves in and out of the market.

As I stated earlier, when judged against those criteria, the specialist system performed extremely well under very difficult circumstances.

DELAYED OPENINGS AND TRADING HALTS

What I want briefly to address next is the subject of delayed opening and trading halts.

In view of the enormous amount of selling pressure, there was a higher number of delayed openings and trading halts in individual stocks on October 19th and 20th, as the Exchange tried to reflect to the public -- both individuals and institutions -- disparities between supply and demand.

The purpose of delaying an opening or interrupting trading is to widely publicize significant order imbalances in individual stocks.

This public disclosure process -- adopted in the early 1970's -- is specifically designed to give investors the opportunity to enter or cancel orders in securities that are experiencing large imbalances in supply and demand, and thus set a new price prior to the commencement of trading.

It's also important to note that decisions to delay the opening or halt trading in particular stocks are not the result of individual specialists operating on their own.

Quite the contrary. Decisions of that nature are made by the NYSE officials on the trading floor. These officials are designated by the NYSE board of directors and are responsible for on-the-spot administration of our trading rules and policies.

In short, the trading halts and delayed openings that occurred during the week of October 19th -- though greater in number than usual -- were part of our consistent policy to get as much sunlight into the marketplace as possible to the benefit of each and every investor.

One of the reasons our lights merely flickered without going out when the financial hurricane struck on October 19th is the fact that we regularly reviewed our systems and planning models. And wherever possible, accelerated implementation of our overall capacity expansion.

Since October 19th, we've taken a number of additional initiatives designed to increase our trading capacity.

NYSE INITIATIVES

The following steps that we've taken relate directly to a number of specific points raised about our automated stock trading systems in the General Accounting Office's preliminary report on the market break.

Specifically:

- In November 1987, the DOT's system memory was increased and several of the system's data files were separated to allow more efficient processing. Further system enhancements are scheduled to be completed by July 1988 to improve DOT's processing capability even more.
- In January 1988, program changes were completed in the Limit Order System to reduce system bottlenecks discovered during the October market break. A major upgrade of the system with more efficient computers is targeted for April 1988 and is expected to result in a 50 percent increase in capacity.
- The NYSE had begun to completely replace our Automated Pricing and Reporting System prior to October 1987, but only a small fraction of the new system was operational by the week of the 19th. We are moving ahead with an entirely new system; replacement is expected to be completed by the end of this month.
- The ability of the NYSE's Universal Floor Device Controller to store and process data has been increased. To add additional capacity, major portions of data normally routed through the Universal Floor Device Controller will be re-routed to other systems over the next three months.

  A problem associated with the Universal Floor Device Controller during the week of October 19th was a backlog of orders directed to printers on the trading floor. January 19, 1988, we opened our expanded Blue Room, adding 30 more printers for an increase of 20 percent. Seventeen more printers will be added to the trading floor by the end of this month. In addition, we currently are working to double the speed of all existing printers.

At the same time, we also have increased the number of electronic display books on the trading floor by more than 25 percent, reducing the overall need for printers. It's expected that by the end of 1988, we will have doubled the number of electronic display books compared to the October 1987 level.

- The capacity of the NYSE's Post Support System to store and process orders has been increased through the use of additional computer power for the system.
- Enhancements in the NYSE's Universal Floor Controller and its printers that currently are underway will reduce the potential for delays in the Exchange's link with the Intermarket Trading System.
- As of November 1987, the computers running the Consolidated Tape System have been replaced. As a result, the system now has the capacity to efficiently process a peak volume of 600 million shares.
- Computer enhancements were made to the As-Of-Status-System on October 24th and 25th, 1987, and we believe the problem has now been solved.

On a broader scale, the Exchange is planning to have the capacity to handle a peak of 600 million shares by June of this year, and we believe that if we were to experience a 600-million-share day now, we would be able to process it with significantly fewer delays than we experienced last October. We intend by early April of this year to run the October 20th requirements through our system to verify our capabilities.

Beyond this, we are planning to have the capacity over the next 18 months to two years to process a billion shares.

In setting that goal, we recognize that the Exchange is only one component of an overall trading network. And that all components need to work together if that goal is to be achieved.

Accordingly, the NYSE recently announced the formation of an Operations Advisory committee, headed by NYSE President Robert Birnbaum and made up of experts in trading operations from member firms of various sizes.

The purpose of the committee is to evaluate problems encountered during peak processing periods and to recommend synchronized corrective actions that would enhance the entire process.

Much of the fallout from the events of October 19th has to do with the relationship between the equity markets and the futures and options markets -- otherwise known as the derivative products markets. This relationship, in which activity in one market can influence events in another market, must be looked at more closely.

GENERAL OBSERVATIONS

The SEC, the Brady Commission and the GAO have all concluded that the equity, futures and options markets are linked and should be treated as a single market for equity and equity related products. Whether or not we are one market now, we are -- at a minimum -- headed toward one market and we must plan for that time in the future when there will be no question that we are one market.

This is a position that was echoed by former U.S. Attorney General Nicholas Katzenbach in his independent study of the long-term impact of program trading on financial markets. That study -- entitled "An Overview of Program Trading and Its Impact On Current Trading Practices" -- was undertaken by Mr. Katzenbach at the request of the New York Stock Exchange. (A copy of the study is attached.)

What this means is that we need to begin to focus more on the interface between the equities and derivative products markets. One, to enable us to better understand how these two markets are coming together.

And two, to permit each of us to become more aware of how we can better adjust to the consequences of the evolving integration of our securities markets.

Specifically, how we can more effectively balance the capital-raising function of our equities markets with the need to manage assets. And how we can determine more clearly what role speculation should play in the marketplace.

Part of the basic problem is that as the derivative product markets are used to shed risk, there's an inadequate appreciation, even among the most sophisticated investors, that risk cannot be taken out of the system. Risk remains in the system and a substantial portion of it reverberates back to the original market.

Index arbitrage is a prime example of what I'm talking about.

I've discussed arbitrage in general on a number of different occasions in the past.

I've pointed out that risk arbitrage between equities after a merger or acquisition has been announced has not caused problems for our markets.

I've testified on previous occasions that anticipatory arbitrage -- involving the purchase of equities in expectation of an unannounced merger or acquisition -- can lead to insider trading abuses.

Index arbitrage is another kind of arbitrage. But unlike traditional arbitrage, index arbitrage does not deal in price discrepancies between equivalent items. Instead, it depends on the yield spread between an index futures contract and its underlying securities.

Its potential returns are enormous, and it is engaged in regularly by a small number of institutions and approximately a dozen of our own member firms.

In contrast, the public at-large, the investing public, a great many of our listed companies and the vast majority of our member firms have the perception that index arbitrage -- which often is referred to generically as program trading -- intensifies market volatility to the detriment of the marketplace as a whole.

Indeed, as of January 28, 1988, we've received 248 letters from the public at-large expressing opposition to program trading. We've also received 130 letters from member firms opposing program trading. (Copies of letters are attached.) There's also been a number of advertisements by Advest, Merrill Lynch and Shearson Lehman Brothers highly critical of program trading. (Copies of the ads are attached.) These firms have substantial retail and institutional divisions and the opinions expressed in those ads no doubt reflect the views of their retail and institutional customers.

Let me point out that while the term program trading includes a variety of sophisticated trading strategies, we interpret the opinions that we've received regarding program trading to refer specifically to index arbitrage.

Accordingly, the immediate question before the Exchange is how to continue to experiment with the link that index arbitrage forms between the equities and futures and options markets, examining whether in fact it makes both markets more efficient, and at the same time, deal with the professional and public perception that index arbitrage makes the markets more volatile.

One of the ways we are attempting to address this question is by controlling the amount of risk rebounding back into our market as a result of selling in the futures market, thereby trying to level off one component of volatility.

Specifically, we are experimenting with taking index arbitrage out of the system whenever the Dow Jones Industrial Average moves up or down a given number of points from the previous day's close.

On January 14th, we initiated a pilot using 75 points and are considering 50 points as the operative range of movement in the Dow.

The overwhelming majority of participants in our experiment believe it has been a very positive step in the right direction, and that it should be extended further. All of this, of course, would have to be approved by the SEC.

Let me add, this kind of approach is, in effect, a circuit-breaker that can be very effective, as evidenced by our experience last October when we took index arbitrage off the system for capacity reasons.

It is asserted in the report of the Brady Commission that the October 20th temporary ban on index arbitrage through the NYSE's systems and the October 21st request by the Exchange that member firms temporarily refrain from index arbitrage for their own accounts exacerbated the market's volatility. We disagree and believe that as these restraints on program trading were applied, volume slowed down and volatility decreased. (See attached chart on volatility and volume.)

In addition, aggressive buying by member firms in the futures market during October 20th and 21st, helped bring that market into balance, indicating that both markets can stabilize themselves when disconnected as well as when they are connected.

It should also be pointed out that in our survey of 302 institutional investors, it was also found that 55 percent of the institutions surveyed were unaware of our decision to place limits on index arbitrage and thus were not at all affected by it. Moreover, 95 percent of those institutions who did know of our decision to limit index arbitrage bought as much or more stock as they would have even if we hadn't limited index arbitrage.

This is further indication that disconnecting the two markets as we did last October did not aggravate the market decline, and that the institutions surveyed were value buyers rather than transaction buyers on the dates in question.

I want to emphasize that we understand that there are no magic answers to the question of market volatility, and that the approach I've just mentioned is only one of a number that we're looking at.

This does not mean that we believe that derivative products per se should be abolished. What it does mean is that as we move toward one market, we have to ensure that that transition is managed. Addressing the question of volatility associated with index arbitrage through the use of circuit breakers is one way to manage the transition.

A more important problem than the public perception problem of index arbitrage has to do with program trading related to the selling of basket of stocks, either independently or in conjunction with futures.

As pointed out in the SEC's study, wave upon wave of basket selling by institutions at times can cause a great deal of illiquidity in the market.

How we handle that illiquidity and what we do if a great number of institutions start to do this kind of activity is really a more serious issue than index arbitrage. For it really addresses the sudden need for liquidity, both in the futures market and the equity market.

This problem alone could at some time in the future lead to a repeat of last October, and is one for which we have no ready answer.

One would think that somehow we would have to slow down the liquidation process, and that the institutions themselves need to better understand that there is no instant liquidity in times of severe stress. In addition, we need to find a way to strengthen the dealer system, which should lead to easy access by the specialists into the options and futures markets to allow them to hedge their positions when they come under stress. All of this speaks to the issues of capacity, volatility and liquidity, issues we are working and which need the attention of everyone concerned.

I want to say at this point that we have neither the authority nor the inclination to ban program trading of any kind. We believe that product and technology innovation is beneficial and essential.

At the same time, we also believe change in our markets should be evolutionary, not revolutionary. And that just because we have the technology to do something doesn't mean we should do it without regard to its impact on the marketplace and its participants.

Congressman Markey, in hearings held by his Subcommittee last December, offered the modern day automobile as an analogy.

Practically every automobile manufactured today is technologically capable of reaching speeds of at least 120 miles-per-hour.

Nevertheless, the Congressman correctly pointed out that we don't allow people to drive their cars that fast. Instead, we impose speed limits and sometimes even put governors on the automobiles themselves.

We do this not because we're against innovation, but because we want to serve the best interests of the public.

The same is true of our securities markets. For we, too, have to manage the speed of change so that the marketplace has an opportunity to adjust to it in a way that benefits all concerned.

Accordingly, I would like to see developed a financial version of an environmental impact statement that can provide guidance, or even an early warning, regarding the potential consequences of new financial instruments, new trading technologies and new forms of risk management.

One way to proceed might be to require all member firms to provide an annual or semi-annual report to the NYSE on the potential financial and operational impact of new and current investment vehicles on both the firms and the Exchange.

The reason is that the risks of some products has outpaced the ability of the system to handle them. That clearly was the case with portfolio insurance and basket selling during the week of October 19th.

Better communication between equity and futures and options markets is a critical factor, as well.

Accordingly, we think the equity and futures and options markets should establish a single repository of information including data across all markets. Such a repository would give us a clearer picture of the direction and scope of each market and of the marketplace as a whole.

As I mentioned earlier, we are planning to have the capacity to handle one billion shares by late 1989. One concern in this regard is that it is becoming increasingly difficult to determine what the upward limit of our capacity should be. For that in part depends on the program trading activities of market participants.

The kind of repository I've suggested could give us a better handle on that kind of information, and in that way help us get a clearer idea of our future capacity needs and those of the entire system.

The NYSE also is supporting a proposal to include the commodities markets dealing in index futures as associate members of the Intermarket Surveillance Group (ISG), which helps facilitate regulatory responsibilities between different markets. (A description of the ISG is attached.) The CFTC could be invited to participate as an observer just as the SEC currently is an observer.

This would give each market a better opportunity to keep the other better informed about what's going on in its own marketplace and what it means for the markets in general.

That's not all. The NYSE is going to initiate an audit of our trading systems every 12 to 18 months to further ensure their proper operation. And we are going to share the audit findings with the SEC.

Of course, the SEC currently oversees our capacity planning policy on a regular basis and is aware of our peak capacity.

We also have discussed the issue of planning and capacity with committees of both the Senate and House of Representatives.

But given the dynamic change in capacity as a result of the continuing integration of our markets and the introduction of new trading vehicles, we think it is appropriate to have an independent audit of our systems by outside experts on a regular basis.

This would help bring a fresh view to our thinking about the subject as well as give the Exchange and the SEC another structured document on which to focus regarding the issue of capacity.

In addition, we believe that as well as intermarket circuit-breakers, each market should put intramarket circuit-breakers in place that are triggered when risk and illiquidity become too great. And these should be articulated beforehand so that every market knows exactly what those circuit-breakers are and under what conditions they go into effect.

And finally, we agree in principle with the Brady Commission's recommendations that one agency should have the authority to set margin requirements in all equity and equity-like products, and that clearing systems should be unified to reduce financial risk.

Moreover, we believe there should be one regulator for all equity related products. Failing that, we would agree with the Brady Commission recommendation on one intermarket regulator.

But until we have one regulator in place, the NYSE recommends that the SEC and the CFTC form as soon as possible a joint advisory committee composed of their respective staffs and representatives from the major exchanges to begin immediately to focus on areas of common concern.

Until we arrive at one regulator, such a joint committee would be an effective interim step.

We are doing everything possible to increase our capacity so that by the end of 1989, we'll be able to process one billion shares.

At the same time, we believe that as our different marketplaces evolve into one market, it is critical that all of us determine the proper balance between the needs of business to raise capital and the interests of effective asset management.

In striking that balance, we must work together to moderate the pace of change so that we can better control the flow of risk within and across our markets and -- most importantly -- create an environment in which all participants have confidence in and access to the marketplace.

As we move toward one market, it's the responsibility of each of us to address this important issue head on.

We at the New York Stock Exchange take this responsibility seriously. We believe that by working together, we can start to get ahead of the problems, understand and manage the transition to more closely related markets, and assure that we continue to have securities markets to sustain prosperity in America.

We look forward to working with the Congress, this committee, the SEC, the CFTC the futures and options exchange and others to ensure fulfillment of that goal in the future as we have in the past.

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COMMENTS REGARDING THE SEC REPORT ON THE OCTOBER MARKET BREAK

I want to make some specific comments regarding the report of the SEC on last October's market break.

Since our statement for this committee was prepared prior to the release of the SEC's report, I am including my remarks about the report as an addendum.

Most of the points I will touch on have already been covered in detail in my testimony. However, the SEC's study on the events of last October is for us the most important study of all. The SEC is our regulator. It understands our business better than anyone else, and its observations and comments on the overall performance of the market as a whole are of particular interest to us. Accordingly, despite some repetition, a few words regarding the SEC's report are called for.

Although we haven't had an opportunty to study all 900 pages of the report, we fundamentally are in agreement with the commission's conclusions and recommendations and -- as chairman Ruder testified on Wednesday -- the NYSE and the SEC immediately are forming a task force for the purpose of examing ways to implement many of those recommendations as quickly as possible.

Here are some specific areas of agreement:

As our testimony indicated, we endorse the SEC's recommendation that there be a joint effort by the SEC, the CFTC and the major equities and futures exchanges to discuss and consider issues and problems of mutual concern.

We agree with the SEC's conclusion that trading capacity needs to be increased, and have as our goal the capacity to handle one billion shares by the end 1989.

In this regard, we have stated that we plan to initiate an audit of our trading systems by outside experts every 12 to 18 months, and will share those audit findings with the SEC. While the SEC currently reviews our capacity planning policy and is aware of our peak capacity, an audit of this sort would give the commission another structured document against which to examine our systems' capacity.

We generally agree with the SEC's conclusion regarding the NYSE's specialists' performance during the period of the market break that overall specialists met their market obligations.

As for those specialists who failed to meet NYSE standards, we have agressivewly reallocated two stocks and will reallocate more in the future. Accordingly, we agree with the SEC that the process of reallocation should be facilitated and intend to work with the commission in developing criteria for doing so.

We also share the SEC's concern regarding volatility in the market. We agree that volatility can be moderated and have recommended the implementation of circuit-breakers to help control volatility associated with index-arbitrage.

On a broader basis, we agree with the SEC's assessment that as demand by a growing number of institutions for instant liquidity in billions of dollars worth of stocks continues, the system will be confronted with pressures in terms of volume, volatility and liquidity never before experienced.

In our judgment, it will take a great deal of work to develop ways to relieve those pressures over both the short and long term so that our system is given the opportunity to adapt to the changing needs of the marketplace and its participants in a manner that's beneficial for all concerned.

We intend to work with the SEC to help our system adjust to the new demands being place on it in a way that's good for the system, for the investing public, for the public at-large and for our country as a whole.

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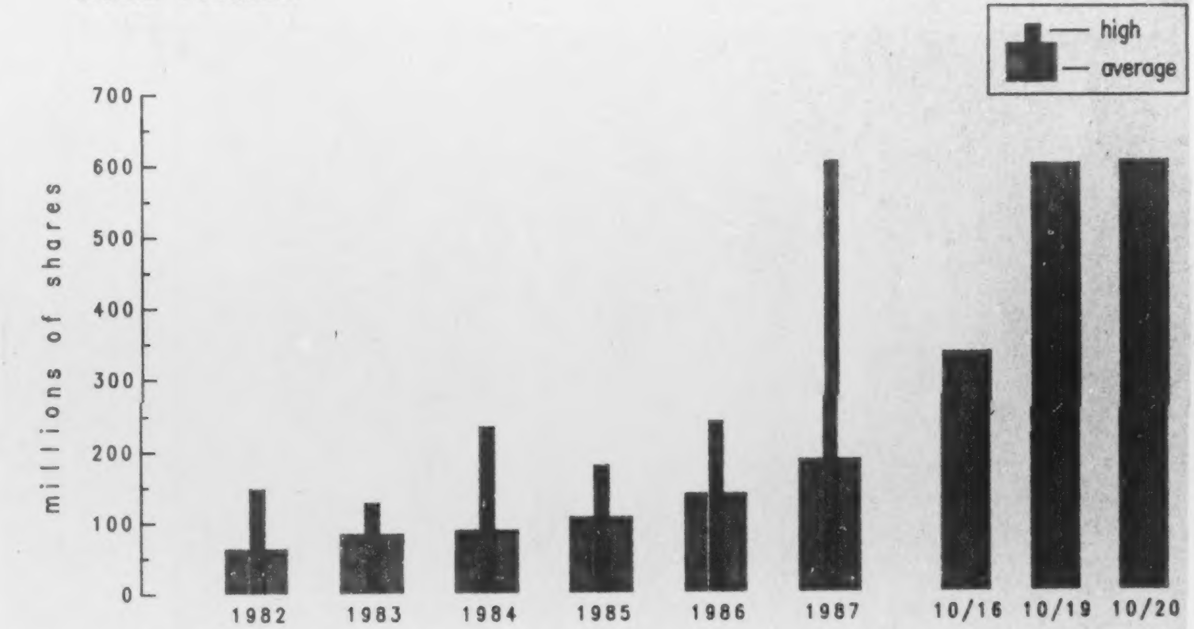
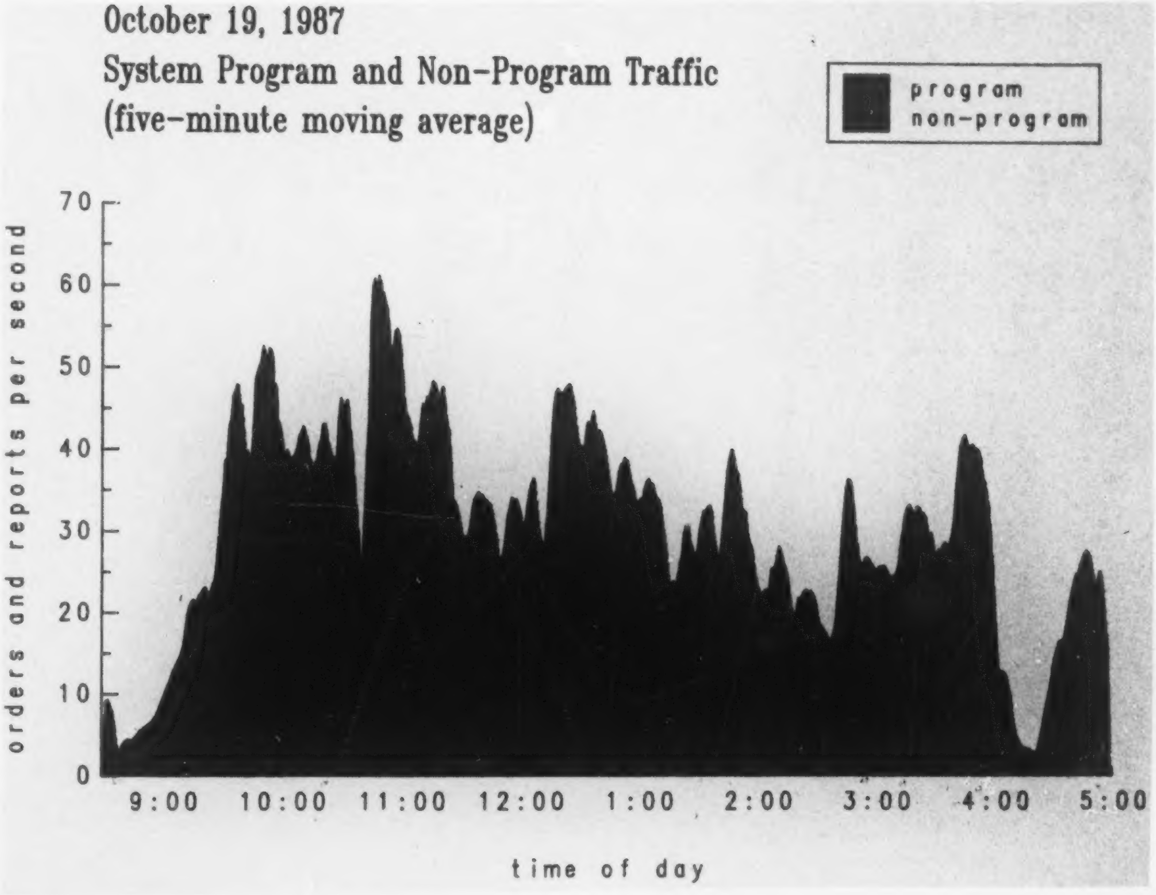
NYSE Volume



	1982	1983	1984	1985	1986	1987	10/16	10/19	10/20
Yearly Average	65	86	91	109	141	189			
High-Volume Day	149	129	237	182	244	609	339	604	609

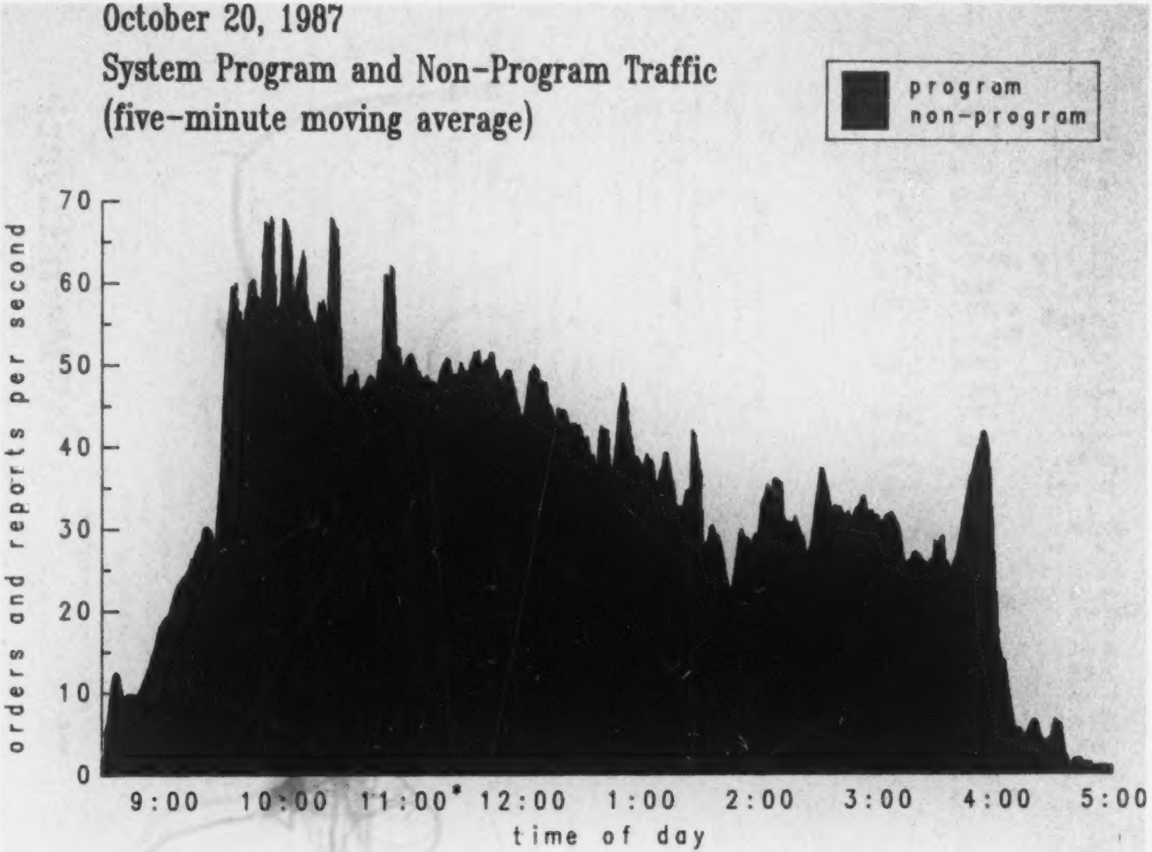
As of December 31, 1987



October 19, 1987

System Program and Non-Program Traffic

(five-minute moving average)



October 20, 1987
System Program and Non-Program Traffic
(five-minute moving average)

* By 11:00 a.m. most stocks were open, and from then on volatility and selling pressure diminished.

A market perspective:

Investor confidence must come first.

Since October 19, a number of studies have sought to determine the causes of the stock market decline and its subsequent effects. Merrill Lynch has participated in those studies and is independently examining the issues as well.

Now it is clear that steps should be taken to reduce volatility in the securities markets. Investor confidence is of paramount importance to free, fair and efficient markets and the capital they generate for growth and jobs.

Market volatility has become a problem so serious that it has led many investors to lose their confidence in the market system as a whole, and to seriously question whether there really is a level playing field.

Merrill Lynch strongly supports a free market system that is both efficient and fair to all participants; we also support a reasoned and disciplined approach to changing the regulations that control the market.

On these issues, Merrill Lynch offers the following perspectives:

- **Coordinated regulatory authority.** Because markets have become increasingly interrelated, Merrill Lynch supports greater regulatory coordination of the markets.
- **Daily limits on futures prices.** We endorse current actions by the nation's commodity exchanges placing temporary daily price limits on stock index futures. This can lessen volatility.
- **Increased capitalization.** Steps should be taken to increase the capital strength of key market participants, including stock exchange specialists and over-the-counter and options market-makers. This will bring greater liquidity–and stability–to the markets.
- **Improved information-sharing.** We believe that all exchanges should closely coordinate information and action at all times.

These measures would go a long way toward reducing market volatility and restoring investor confidence. As the debate proceeds, it is important that clear thinking and objectivity prevail, rather than emotional reactions and short-sighted solutions.

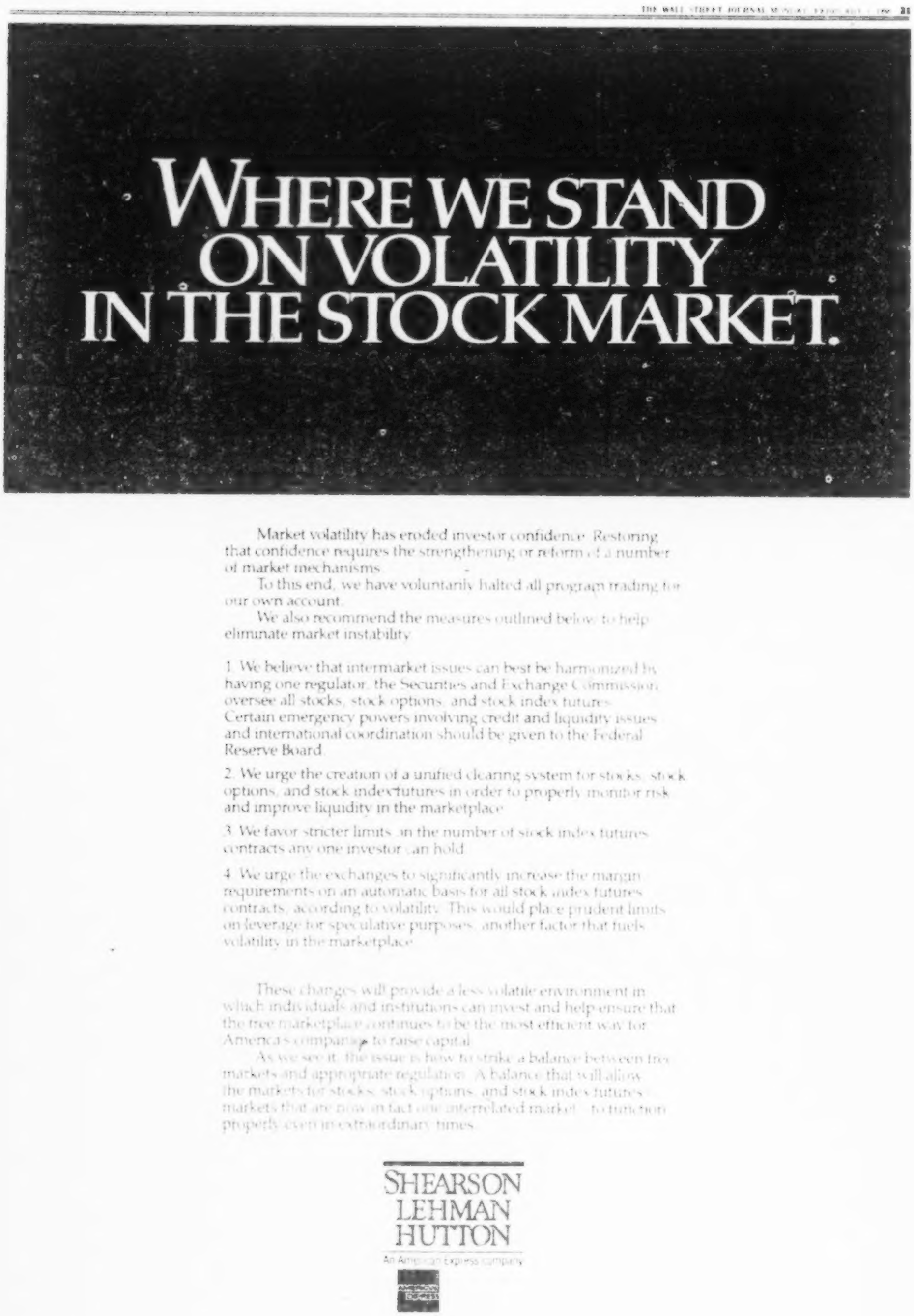
For our part, we will continue our current practice of not initiating index arbitrage trades for our own account until responsible and long-term solutions to the problem of volatility have been found.

It is important to remember that serious problems often lead to quick fixes rather than effective solutions. At Merrill Lynch, we will continue to take all responsible steps necessary to protect investors and to maintain their trust.

Broad-based participation by investors in the financial markets has helped to make our nation's economy one of the strongest in the world.

The preservation of our free market system is in the best interest of people everywhere. The times call for all of us–members of the investment community, regulatory authorities and government officials alike–to join together in finding responsible and lasting solutions toward that end.

Merrill Lynch



WHERE WE STAND ON VOLATILITY IN THE STOCK MARKET.

Market volatility has eroded investor confidence. Restoring that confidence requires the strengthening or reform of a number of market mechanisms.

To this end, we have voluntarily halted all program trading for our own account.

We also recommend the measures outlined below to help eliminate market instability.

1. We believe that intermarket issues can best be harmonized by having one regulator, the Securities and Exchange Commission, oversee all stocks, stock options, and stock index futures. Certain emergency powers involving credit and liquidity issues and international coordination should be given to the Federal Reserve Board.

2. We urge the creation of a unified clearing system for stocks, stock options, and stock index futures in order to properly monitor risk and improve liquidity in the marketplace.

3. We favor stricter limits on the number of stock index futures contracts any one investor can hold.

4. We urge the exchanges to significantly increase the margin requirements on an automatic basis for all stock index futures contracts, according to volatility. This would place prudent limits on leverage for speculative purposes, another factor that fuels volatility in the marketplace.

These changes will provide a less volatile environment in which individuals and institutions can invest and help ensure that the free marketplace continues to be the most efficient way for America's companies to raise capital.

As we see it, the issue is how to strike a balance between free markets and appropriate regulation. A balance that will allow the markets for stocks, stock options, and stock index futures—markets that are now in fact one interrelated market—to function properly even in extraordinary times.

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STOP PROGRAM TRADING

INDIVIDUAL INVESTORS ARE VITALLY IMPORTANT

There is unprecedented volatility in today's stock market. We feel it is largely caused by program trading—a practice which, we believe, should be abolished because it serves no useful purpose for individual investors or the capital formation process.

Many people, both in the securities industry and outside of it, share our opinion. But everyone, including individual investors, must be heard. We must let the regulators and the legislators know that we believe program trading should be stopped.

A brief note—to the right people—is all it takes. Letters to the New York Stock Exchange or the Securities & Exchange Commission are good places to start. In addition, you can make your voice a part of the hearings taking place in Washington by writing to your congressional representative or the chairmen of the House and Senate committees studying this issue.

There is one more very important step you can take to express your disapproval. Ask your broker if that firm engages in program trading. If so, use "the pocketbook vote." Leave and take your business elsewhere. Take it to a company which does not engage in trading practices that ultimately harm our nation's equities markets. Those markets are the envy of the free world and must be protected.

We are one of many firms who have not, do not and will not make use of program trading techniques.

Write to:

John J. Phelan, Jr.
Chairman and Chief Executive Officer
New York Stock Exchange
11 Wall Street
New York, NY 10005

David S. Ruder, Chairman
Securities & Exchange Commission
450 5th St. N.W.
Washington, D.C. 20549

The Honorable William Proxmire, Chairman
Committee on Banking, Housing
& Urban Affairs
Dirksen Senate Office Building S.D. 534
Washington, D.C. 20510

The Honorable Edward J. Markey, Chairman
House Subcommittee on
Telecommunications & Finance
House Office Building HA-2, Rm. 316
Washington, D.C. 20515

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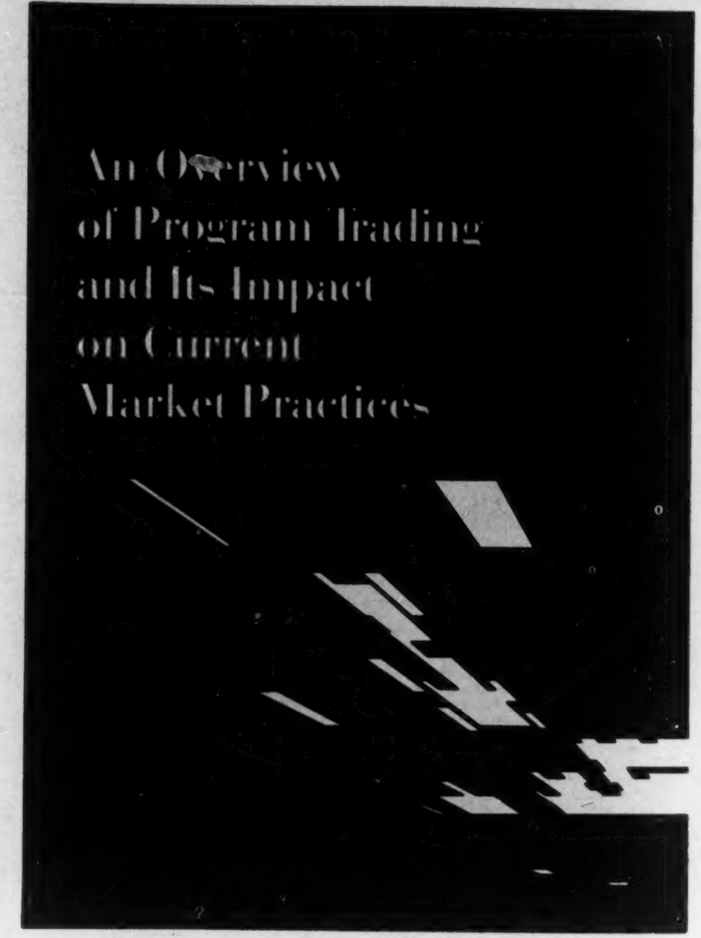

An Overview of Program Trading and Its Impact on Current Market Practices

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I. INTRODUCTION[1]

> In reading the history of nations, we find that, like individuals, they have their peculiarities; their seasons of excitement and recklessness, when they care not what they do. We find that whole communities suddenly fix their mind upon one object, and go mad in its pursuit; that millions of people become simultaneously impressed with one delusion, and run after it, till their attention is caught by some new folly more captivating than the first.
>
> —Charles Mackay, *Extraordinary Popular Delusions and the Madness of Crowds*, 1852, Preface at XIX (Harmony edition, 1980)

> There is a natural human tendency after any great disaster to search for a single scapegoat, to whom the responsibility that should be shared by others may be diverted.
>
> —Sir Arthur Salter in a 1932 speech about the economic situation quoted in John A. Garraty, *The Great Depression* 4 (1987)

When we commenced this study of program trading in the Spring of 1987, the Dow Jones Industrial Average was well on its way to breaking 2,700 in what would appear to be the peak of a bull market that had begun some five years before, in the Summer of 1982. Our primary goal was to understand and explain the trading strategies that were lumped together under the rubric of program trading, a term that occurred in the media with increasing frequency and sometimes sinister overtones whenever the bull market experienced a downturn, or the quarterly chaos dubbed the "triple witching hour" occurred. In addition, we attempted to evaluate the potential relationship of present trends to a "market meltdown," a term brought public by the chairman of the New York Stock Exchange ("NYSE").

As we proceeded with the study, we became convinced that a "meltdown" could hardly be ruled out on an *a priori* basis. Moreover, we recognized the limits imposed by the obvious. Program trading was taking place in a bull market and there was simply no experience with these trading strategies in the face of a major downturn. A perverse fate, however, obligingly provided that experience on Black Monday, October 19, 1987, when the stock market fell 508 points, an unprecedented drop almost twice that of October 29, 1929 in percentage terms.[2] Indeed, perhaps the closest historical parallel for Black Monday 1987 would be that of July 31, 1914, when an impending avalanche of sell orders on the eve of World War I compelled the NYSE to suspend operations. We make no claim to any particular wisdom about the events of October 19, 1987, an expressed humility reinforced by the controversy still surrounding the October 1929 market crash. Instead, our study offers only those preliminary views and tentative conclusions about Black Monday that relate to our more general concern about program trading and the derivative markets underlying this development.

Program trading has obviously become a focal point for criticism, fairly or unfairly. Since few understand it and since the name itself vaguely suggests some new tool for manipulating the market, the term has seized popular and Congressional imagination as a possible scapegoat for explaining market volatility. Yet concentrating simply on program trades can be misleading. In the first place, merely trading simultaneously a number of stocks, which is the essence of program trading, can hardly be the cause of whatever problem may exist; nor should we be troubled by the fact that in the last two decades of the 20th century, particular trades are selected by the use of a computer. The problem, if there is one, lies in the fact that these trades most often key off a relationship between the stock index futures market and the "basket" of stocks traded on the NYSE that mirror (or are intended to mirror) the index product. Whatever problems may exist are present because investors are trading simultaneously in both the stock index futures markets and the markets for the underlying securities. In general, they are conducting these trades to make money from arbitrage by taking riskless advantage of the price spread between the markets or they are using the futures market as a hedge for investment or disinvestment in a number of stocks. This hedging can be "passive" such as investing in an index on the futures exchanges or "dynamic," which represents a continuous effort to lock in gains or minimize losses by buying and selling a stock portfolio or surrogate stock index future, depending upon which is momentarily the more attractive. In short, whatever problems there may be cannot be solved by outlawing program trading or forbidding the use of computers by broker-dealers. Instead, these problems must be addressed by reference to the index products themselves.

With regard to the method of this study, we began by reading the large, though often repetitive, literature that surrounds this subject. We then proceeded to interview those in the brokerage and investment community most familiar with our subject. While we obviously encountered a divergence of views, we also found a surprising consensus on a number of important issues. We did not limit our focus to Wall Street, and instead canvassed the opinions of those managing the Chicago derivative markets as well as those with regulatory responsibilities at the Securities and Exchange Commission ("SEC") and the Commodity Futures Trading Commission ("CFTC"), as well as those with oversight responsibility in the Congress.

Many of those interviewed will strongly disagree with the analysis and the recommendations of this report.

Nonetheless, they were helpful to our understanding, and we appreciate the time they gave us to share their vast knowledge and experience with us.

Finally, the Chairman and Board of the New York Stock Exchange stated from the outset that they wanted our recommendations to be uninfluenced by their views. Accordingly, they gave us a free hand to arrive at our own conclusions. We have done that. The opinions presented here are those of the authors, not the Exchange.

II. THE EVOLUTION OF THE FINANCIAL MARKETS

A. Introduction

In order to understand program trading, we must first understand the historical context in which this phenomenon has developed. We live today with financial markets that have evolved over the past fifty years from a continuing interaction between the asserted need for government intervention and the claimed application of free market principles. Although the federal regulatory structure established by the New Deal remains largely in place today, in recent years a philosophy of deregulation has been in the ascendant, dominating an era that has given birth to a welter of new financial instruments. Furthermore, institutions have come to play an increasingly important role in our financial markets. Finally, these markets have become internationalized, forcing regulators and participants, as never before, to think in global terms.

B. Federal Regulation Of Financial Markets: A Historical Overview

The Great Depression ushered in a host of legislative remedies for the perceived afflictions of American financial markets. The list includes the Banking Act of 1933 (the Glass-Steagall Act), the Securities Act of 1933, the Securities Exchange Act of 1934, the Federal Credit Union Act of 1935, the Maloney Act of 1938, and the Investment Company Act of 1940, just to name the major enactments. Although each Act has been updated and amended over the decades, taken together, these laws brought about a radical restructuring of the financial system and still stand today as a safety net under the risks of capital formation.[3]

The Banking Act of 1933 prohibited commercial banks that were members of the Federal Reserve System from buying or selling, even underwriting, corporate securities for their own account. So powerful was the impetus for separation that banks were uncompromisingly prohibited from being affiliated in any manner with securities firms or investment trusts. By the same token, securities firms were prohibited from accepting deposits that were subject to withdrawal by checking, passbook, or certificate.

The Securities Act of 1933 (the "1933 Act") was passed in reaction to the market abuses of the 1920's. The 1933 Act essentially represented a "sunshine" approach to the prevention of fraud and unethical financial practices, but was limited in application to the issuance of new securities and was viewed by many, including future Supreme Court Justice and first SEC Chairman William O. Douglas, as less than adequate.[4] In its wake, therefore, came the Securities Exchange Act of 1934 (the "1934 Act"), which established the SEC. The 1934 Act set up a framework to prevent stock manipulation and fraudulent trading practices and also authorized the Federal Reserve Board ("FRB"), consistent with the agency's oversight of the nation's money supply, to set margin rules. These three laws govern our markets today as they have since the 1930's.

The legal framework for federal oversight created by the New Deal ushered in an era of public reliance on the watchfulness of government regulators, and generated at the very least a convincing appearance of stability in the exchange markets. The nation was largely unconcerned with any inefficiencies inherent in this new structure. Inefficiency, however, would later become a catalyst for many of today's reforms.

C. Economic Change And The Regulatory Structure

From the end of World War II until the 1960's, the United States and its Western allies operated within a stable economic system under American leadership. In this country, the SEC's deference to the many anti-competitive rules of the exchanges helped create a market system resistant to change. While this system continued into the 1970's, economic forces combined with other developments brought about fundamental change, including the demise of the Bretton Woods Accord, the advent of the OPEC cartel, and in this country, the end of fixed brokerage commissions on the exchanges.

The economic forces that changed the financial system also placed pressure on the regulatory structure. The banking industry probably fired the first shots with the introduction of certificates of deposit and negotiable orders of withdrawal. These instruments were at odds with existing regulatory policies and undoubtedly contributed to a major change in the regulatory status quo. The securities industry responded with the now commonplace money market funds. Given what seemed to be a blatant crossover of the respective preserves of the banking and securities markets, these funds raised questions when initiated but eventually passed muster under a severely weakened Glass-Steagall Act. Their status as glorified bank deposits made them the bulwark for a push towards "disintermediation," or the direct transfer of capital between issuers of corporate instruments and the investing public, without the need for the bankers' expertise. Moreover, the uprising of institutional investors against the fixed commission rates of the

NYSE, the incredible success of money market funds, the failure of some major banks and the savings and loan crisis of the early 1980's all dramatically lent support to the growing view that the existing financial system and the accompanying regulatory structure might need major reform.

D. Regulatory Reform And The Role of Institutions

The process of regulatory reform has been slow and has met with countless hurdles—legal, practical, and otherwise. As in any movement of this sort, the credit and the blame for the changes can be fairly distributed among many. Yet in this context, it was the institutional investor who made the impetus for change a reality.

In just one decade, from 1970 to 1980, the daily volume of trading on the NYSE mushroomed from 12 million to 45 million shares. Large block transactions, those comprising a transfer of 10,000 or more shares at a time, rose from 15% of daily trading in 1970 to almost 50% in 1986.[5] More recently, on October 19, 1987, the volume of shares traded on the NYSE for that day alone surpassed the volume for entire years in the early 1950's.[6] Congress took account of the changes by enacting the Securities Acts amendments of 1975, and mandating the SEC to move as rapidly as possible towards the implementation of truly competitive central securities markets.[7]

Today's financial environment is largely dominated by institutions.[8] Competition is intensifying among brokers and investors, among the exchanges and even among the regulators themselves. The boundaries of financial markets, from the demarcation between banking and investing to the presumably slighter distinction between any two given instruments, defy precise delineation. With newer and bigger players, disintermediation is taking on increasingly new twists as new and innovative financial instruments pour out of America's financial houses.

As more and more of this country's wealth has continued to gravitate into the institutional investment pools, we have come to accept this "institutional dominance" of equity markets. Since institutions provide such an important background to our study, their characteristics and *modus operandi* are summarized below.

1. *Pension funds*

In the first stage of their development, corporate pension funds were little different from the typical individual investor, in motives and operational strategy. They retained a professional financial institution to set and supervise an asset mix, with long-term objectives and relatively little turnover. As these pools grew larger, however, corporations took notice of the immense potential of the funds in their hands and increasingly doubted the ability of outside firms to outperform the market. These doubts seemed to be confirmed with the economic turbulence of 1973 and 1974, and institutional clients began to question the wisdom of relying on external money managers. The final catalyst was the passage of the Employee Retirement Income Security Act ("ERISA") in 1974, which forced corporations to take a more active role in the management of their pension funds. When ERISA became effective, corporations were required to supply detailed documentation and to take a carefully formulated and conservative approach to investment.

These changes ushered in an investment strategy that is now referred to as "macro" management, "macro" denoting not the size of the funds but the hiring of several outside managers and consultants to be collectively supervised by in-house staffs. With the overall investment responsibilities brought back within the company, corporate managers began to discover uses transcending the sole goal of providing for retirement. The funds accumulated for pensions now could also be used as anti-takeover shields; they had enormous tax reduction potential; and increasingly they figured prominently in a company's attractiveness to prospective employees. More recently, changes expanding financial reporting standards for pension funds[9] indisputably engrained the idea that the pension plan is a real and useful asset, and that it must be an integral part of the financial picture of the company.

As a basic proposition, the corporate pension fund manager may determine, in consultation with the corporate board of directors, a generally proper and conservative mix of equity and debt or real estate and so forth, and assign appropriate portions of the total investment fund to managers with particular skills in each area of investment. The investment is usually spread in a fairly traditional way, that is, based on the pension plan's need for cash in the relatively near future, other parameters of the plan, and macro-economic factors such as GNP, debt, trade, inflation, etc. Optimism about the economy and earnings would tilt the fundamental mix somewhat towards equity; pessimism would tilt it somewhat towards debt instruments. Other trust-like funds, federal, state, and municipal pension funds, universities, foundations and the like are supervised in much the same way, and always have been. The differences lie in the increasing amounts of money managed this way, the use of more and more dedicated professional managers, and the pressure on those managers to perform.

As deregulation took hold and "macro" management became popular, pension funds apparently began to design and operate what are essentially portfolios within portfolios. The individual packages—or portfolios—of stocks and bonds would be parceled out to an array of different outside managers and consultants who would be judged on their performance. That performance has increasingly tended to be assessed on a quarterly basis.

2. *Mutual Funds*

Mutual funds have many similarities to pension funds and represent a means of risk spreading; at a minimum they spread investment over several securities, sometimes a mix of debt and equity, sometimes all debt or all equity. Having grown out of the economies of scale generated by pooling investments, they provide the small investor with the opportunity to spread risk in much the same way a pension fund does for its beneficiaries. Since they are not governed by pension fund restrictions, they have the advantage of added flexibility, but only to the extent investors are willing to assume any added risks. To attract investors a mutual fund may, for example, concentrate investment in particular areas and thus be more specialized than the average pension fund. The desire to focus on particular objectives may even be grounded on political strategies unrelated to investment economics, such as the emergence of funds free of South African-related stockholdings for many state, university and city pension and investment funds.

Mutual funds are, of course, legally quite different from pension funds because mutual funds are shares in a fund composed of a variety of financial investments. Pension funds, on the other hand, are corporate investments inuring to the ultimate benefit of employees. Yet in essence they are more alike than not; each diversifies investment to spread risks and each is professionally managed, though the pension fund manager is reviewed by corporate offices at periodic intervals and the mutual fund manager is "reviewed" by the market on a daily basis. Furthermore, each fund is a vehicle for retirement, although mutual funds are obviously not limited in that regard. Yet governmental policy certainly has encouraged the melding of the two vehicles through the tax advantages of IRA and Keogh account savings, which, as a practical matter, end up as retirement funds that are invested in one mutual fund or another.

3. *Others*

Other institutional investors have greater public familiarity because of their longer presence on the investment scene, such as insurance companies, commercial and savings banks, investment houses trading for their own account, and the like. While different regulatory frameworks, different traditions, and different business requirements may affect risk taking and risk spreading strategies for each of these participants, they do have in common large amounts of money to invest and professional managers to help them maximize returns on these investments. Thus, banks, for example, would be more heavily transacting in fixed-term investments, government securities, and commercial paper because of legal constraints on venturing into corporate securities. They are nonetheless players in those markets, perhaps more regulated than most, but less regulated than they used to be.[10]

Modern technology has also served to give the markets a distinctly global character. For the most part, "internationalization" means simply that American and foreign investors—usually institutions—are prepared to invest in the securities traded on markets foreign to them. While this willingness to invest includes consideration of the whole panoply of investment instruments, government securities and short-term debt are particularly attractive simply because they are easier for foreigners to understand, to assess risk, and to evaluate comparative returns.

E. Some Consequences Of Institutionalization

The growth of institutional investors and the parallel deregulatory trend, especially competition on commission rates, has had two obvious effects. One is the growth of trading generally on all exchanges. The other is the growth, as was noted above, of very large "block" trades. There is a third related effect, which is perhaps less obvious though certainly not less important, namely, the extent to which trading has supplanted investment, and short-term profit objectives have supplanted long-term considerations.

1. *Trading Growth*

While one might expect substantial trading growth simply from economic growth generally, the increase of trading volume on the NYSE in the decade from 1970 to 1980, as discussed above, has been phenomenal. Equally impressive has been the increase in value of the shares traded. Although the overall changes in value of NYSE listed stocks can be attributed to listing variations, stock splits, and stock dividends in addition to basic economic movements, the magnitude of the change merits a healthy respect. In just two decades, from 1965 to 1985, the market value of NYSE listed stocks exploded from $538 billion to a staggering $2 trillion.[11] Similar growth has occurred on the AMEX, NASDAQ, and other equity exchanges. The same is true on foreign exchanges, as seen in the upward spiral of the Nikkei average in Japan. Moreover, new financial instruments to tackle the complexities and opportunities of this new world have poured in, facilitated greatly by advances in computer and communication technology. The Chicago Mercantile Exchange's ("CME") introduction of currency futures exemplifies a bold and innovative beginning to the reformulation of world financial markets that began with the death of fixed currency exchange rates.[12]

Clearly, new investment instruments, buoyed by the efficiency of instant communications, have attracted new capital and provided an outlet for the velocity of money. Confidence in the integrity of worldwide markets has induced the exploration of new frontiers. Money never before available—whether because of exchange restrictions, absence of knowledge about marlists, or the lack of appropriate investment instruments—is today available to capital markets. This monetary lift helps perpetuate a chain of events enhancing commerce, capital investments, and overall real economic growth.

Even if we were to set aside the agility of today's communication networks, the fact that investment here and abroad has become institutionalized has obviously contributed to the movement towards internationalization, simply because only large institutional investors can possibly afford the resources necessary to understand, evaluate, and monitor closely new worldwide investment opportunities. The information necessary to act in an informed way requires a large investment base over which to spread the costs of being informed. Trading growth has, however, been so great as to raise at least a question as to whether communications and institutionalization are the only catalysts. The trend may simply stem from the growth of the money supply and the availability of information, but it may also separately reflect a change in investment philosophy from long-term considerations to short-term objectives.

2. *Professional Management*

Managing many billions of dollars of other people's money through trained and informed professional investors has had interesting and not totally predictable consequences. It has concentrated investment decisions and produced a potentially greater impact on the price per transaction. A decision to buy or sell particular securities in very large amounts can influence prices and would indeed have much more impact, giving rise to greater volatility, had investment houses not developed procedures for arranging the buying, selling, or the supervising of the transfer of large blocks of securities "upstairs," or off the exchange floor. Avoiding large commissions on sales and minimizing trading impact on prices have led investors to create new ways of making the large trades that portfolio managers with large holdings frequently wish to make.

Obviously the fixed commission system, by increasing the cost of trading, served as a brake on the size of trading that competitive or negotiated commissions no longer provide. Reducing such costs clearly makes it easier to trade, and those with large blocks of securities to trade have both the incentive and the bargaining power to negotiate the best rates.

Given the potential price impact of a very large trade on the floor, it obviously makes sense to arrange it off the floor, where price can be negotiated, and only ultimately take it to the floor for formalization. There paradoxically then emerges a contradiction to the very *raison d'être* of a market system: trades are more efficiently conducted by staying away from the very market that was created to bring buyers and sellers together. Nevertheless, a huge order or particularly a series of orders on the sell side going to the floor could halt trading if the specialist could not take the other side and needed time to find buyers. Indeed, that is precisely what appears to have happened to several issues in the beginning trading hours of October 19, 1987. The larger the orders, the greater burden they impose upon the present system despite its almost surprising capacity to trade millions of shares and keep an orderly market at the same time.

The point is that professionals managing very large portfolios have found it possible to trade large blocks of securities without either large commissions or "impact" costs. Some impact costs remain, but the apparent liquidity of the market has been a factor in permitting substantial trading among professional managers. What pension fund A wishes to sell, pension fund B may wish to buy, each with independently good reasons. Fund A may be locking in a profit and fund B may be investing cash, and so forth. Hence the emergence of "fourth" markets, in which institutional investors deal directly with each other, completely bypassing any intermediaries.

Because pension funds are of necessity broadly diversified, it is difficult for any in the short term to do better than the market as a whole measured by some appropriate index such as the S&P 500. For corporate supervisors to measure fund managers over longer time spans is difficult because they are under pressure to select competent fiduciaries, and waiting several years to get a good picture of their worthiness seems intolerable. To say this is not to say that managers do not continue to select many stocks for what they believe is their long-term potential. It is just that there is tension between the fund's long-term investment objectives and pension obligations and the short-term race for performance.

An additional incentive for the prevalence of short-term horizons may lie in the current framework of the tax code. Pension fund managers, unlike individuals, buy and sell without tax consequences to the fund or its beneficiaries. To the extent, moreover, that capital gains treatment was designed to encourage investors to hold investments for several months, that too is disappearing with the new tax code. Whether the change is significant or not is difficult as yet to quantify. Individuals trade less than institutions, but it is a factor worthy of consideration simply because it is pushing in the same short-term direction.

In the short-term market, price fluctuations are more likely to reflect macro-economic judgments about the state of the economy as a whole than simply different predictions about the future earnings of particular stocks. The latter should vary little on a daily basis. Government action, however, can affect large groups of stocks and therefore the market as a whole. All kinds of news events about political actions, economic developments, agricultural products, legislation, court decisions, resolutions, even weather, can and do affect the

"market"—not all stocks equally or in the same manner, but the average of a large number traded on the exchange. Given the classic splitting of each stock's risk into systematic and unsystematic risk, or market risk and individual risk, a macro shift will by definition trickle down to individual stocks and affect each one in some particular manner.

Until recent times, portfolio theory was universally accepted as the means to reduce or eliminate the unsystematic risk component of a given stock by combining it with another stock apt to move in a different direction in the event of change. The differing changes, it was presumed, would simply cancel each other out and thus preserve the overall status quo. The systematic risk portion, however, had been largely regarded as a given, not to be tampered with, lest one engage in an exercise in futility. The advent of index-based products, however, has changed all that, as we discuss below. By going long or short on index futures, for example, a manager could reduce both systematic and unsystematic exposure to his portfolio, and thus have a product that is invincible, at least in theory. Such theoretical invulnerability, however, assumes a market liquid enough to absorb both bad news and large selling volumes. But, as we shall see, that is a large assumption, as October 19 taught us once again.

These, then, are the historical developments in our financial markets and regulatory structure that provide the necessary background to an understanding of program trading. At the same time, program trading would be a matter of little current significance but for the extraordinary development of derivative markets; and it is to these "shadow markets" and the trading strategies they have made possible that we now turn.

III. THE BASIC DERIVATIVE INSTRUMENTS

A. Introduction To Derivative Instruments

Derivative instruments—in the form of futures and options—are exchange traded contracts that shadow a commodity, financial instrument or index. They are ordinarily standardized delayed delivery contracts in which two parties agree to exchange a specific quantity of the asset underlying the derivative instrument at a future date at a price established in the present, though, as we shall see, index futures are different in one important aspect. As such, derivative instruments should not be viewed as investments but rather as a means for owners of commodities, financial instruments or stocks and bonds underlying an index to shift price risks associated with ownership of such assets.

1. *History Of Futures And Options Markets*

Futures markets in the United States developed in the nineteenth century as a vehicle for producers and users of agricultural commodities to cope with price volatility associated with ownership of agricultural commodities. As a result of new farm technology, improved transportation and a rapidly growing population, commodity prices became less influenced by local supply and demand conditions and affected more by national or global market conditions.

A futures contract has standardized contract terms and commodity specifications allowing for consistency in grade, time, and point of delivery, thus enabling the contract to be traded on an exchange. Moreover, only a small proportion of futures contracts actually result in delivery of the commodity itself.[13] Since the first futures contract, a grain future, was traded on the Chicago Board of Trade ("CBT") in the 1860's, there has been a proliferation of futures contracts on other agricultural commodities as well as on livestock and precious metals.

With the introduction of financial futures, parties were able to shift risks associated with interest or currency exchange rate fluctuations. As previously discussed, the first currency future began trading on the CME in 1972, and in 1975 the CBT was given permission to establish a futures market in GNMA[14] securities. The success of the currency and GNMA futures led to the development of futures contracts in other financial instruments such as Treasury bonds, Treasury bills and indices such as stock indices, corporate bond indices and municipal bond indices.

Exchange traded commodity options contracts also have a long history, with the CBT developing such contracts shortly before the Civil War. As explained later, options offer a legal and trading framework different from futures for shifting risk. Commodity options have been plagued with a long history of serious abuses and were in large part blamed for the collapse of the wheat market in 1933. In reaction to that market collapse, Congress enacted the Commodity Exchange Act of 1936. This legislation contained a blanket prohibition on regulated options, that is, agricultural commodities. Abuses in unregulated commodities markets in the 1970's led Congress to impose a moratorium on the trading of all options contracts in 1978. This has remained in force until 1982.[15] Today, there exist options on index futures contracts as well as options on agricultural and non-agricultural commodities, on a variety of financial instruments and on individual shares of stock.

2. *Futures And Options Contracts*

Futures contracts can perhaps be best explained by using the familiar example of a farmer anticipating a wheat crop in a future month and wishing to protect himself from a decline in current market prices. The farmer would, through a member of the relevant exchange, enter into a futures contract to sell a stated quantity of wheat at current prices in that future month (a "short" position). By entering into the futures contract, the farmer would have assured himself of a price for his wheat, regardless of whether the price of wheat rose or fell between the time of contracting and the date of delivery. For protection against having to sell at a lower price, the farmer is willing to forgo an additional profit if the price of wheat should rise.

The person taking the other side of the contract would either be a speculator, expecting to profit from price volatility, or another hedger. The other hedger in this example would be a user of wheat, a grain merchant for example, concerned about increases in the price of wheat in a future month. The grain merchant would, in the same way, purchase a futures contract to buy a stated quantity of wheat in that future month at today's prices (a "long" position). For assurance of that price, the grain merchant would forgo the opportunity to profit from buying wheat at a lower price if the price of wheat declines.

Futures contracts are traded on the basis of "margin" deposits, generally ranging from 5 to 10 percent of the contract value, which act as good faith performance bonds of the parties to the contracts. Both the purchaser and seller of the futures contract are required to make a deposit known as "initial margin," upon entering the contract. The contracting parties are also required to make additional payments on a daily basis, known as "maintenance margin," as the market moves adversely to their position. Conversely, the other contracting party in whose favor the market has moved would receive payments of variation margin.

In contrast to futures contracts, options convey the *right*, not the obligation, for the purchaser of an option to buy (a "call" option) or to sell (a "put" option) a specified amount of a commodity or financial instrument at a specified price on or before a specified date. The seller of an option, however, is obligated to respond either at the end of the option period (European option) or if and whenever the purchaser decides to exercise his option (American option).

The seller of the option is required by the options exchanges to make initial and margin payments because he is potentially liable for unlimited losses if the market moves against his position.[16] The purchaser of the option, however, cannot suffer unlimited losses caused by movements in market price. If the price of the commodity, financial or index future had moved adversely to his position, the purchaser merely would not exercise his option. Thus there is no need for margin payments; a purchaser of the option simply pays a "premium" which becomes the maximum amount that the purchaser could lose, that is, the price of the option. Purchasers of options who fail to exercise their options prior to the exercise date suffer a loss of the premium paid. This in effect allows purchasers of options to limit losses if the market moves against their position, and allows them to realize the full amount of any gain if the market moves the other way.

Options, like futures, can be used to manage and control price risks associated with commodities or financial instruments. Going back to the prior example, instead of selling a wheat future to protect against a price drop, the farmer could have purchased a wheat "put" option, the right to sell wheat at a later date at a predetermined price. If the anticipated price decline occurs, the farmer would exercise his option and sell the wheat at the predetermined price. If the price of wheat increases, the farmer would let the option expire, losing his premium, but would then sell his wheat at the higher price. Conversely, the grain merchant could purchase a "call" option, the right to purchase wheat at a later date for a predetermined price, to protect himself from a price increase. If the price of wheat increases, the grain merchant would exercise his option to buy the wheat at the fixed price. A decline in the price of wheat would result in the grain merchant letting the option expire and forfeiting the premium, and he would purchase wheat in the open market at the lower price.[17]

B. Stock Index Futures And Index Options[18]

Stock index futures and options are similar to their agricultural counterparts but with important differences. First, while the asset underlying the wheat future or option—wheat—has a cash market, the asset underlying stock index futures and options—an index—has no cash market; only the individual stocks that make up the index collectively compose a cash market. Second, instead of the main users of wheat derivative instruments being producers and users of wheat (farmers and the grain merchants), participants in stock index futures and options are both users (investors) of the stocks that make up the index. Third, these users generally use such instruments to hedge only against downside risk, unlike the usual commodity future where the parties are hedging against upward as well as downward price moves in the commodity; users of index futures and options normally use such instruments to profit from market upswings rather than to hedge against them. Fourth, index futures at present cannot be settled by[19] physical delivery. Instead, unlike other futures, in these instruments the parties contract for the payment of a cash sum equal to the weighted prices of the stocks in the index—in effect only the profit or loss between the purchase price and the expiration price. The cash settlement procedure for index futures and options is used because delivery of the stock underlying the index has been judged to be too costly and unnecessary.[20]

The use of index futures is relatively simple. For example, the popular S&P 500 index future is a contract to buy or sell the value of the S&P 500 Index multiplied by $500. Thus, if the value of the S&P 500 Index were 245, one contract would be worth $122,500 (value of the index [245] multiplied by $500). The index futures contract specifies that settlement in cash must occur upon the termination of the contract, with the settlement

being the difference between the contract price and the actual level of the stock index at the expiration of the contract. Thus, if an investor entered into a futures contract to buy a contract of the S&P 500 Index at a specified future date at 245, and the S&P 500 Index is at 249 on that future date, the investor would gain $2,000 ($500 multiplied by the gain of 4). If the investor entered into a futures contract to sell an S&P 500 futures contract at the contract price of 245 and the S&P 500 Index is at 249 on that future date, the investor would lose $2,000 ($500 multiplied by a loss of 4).

In contrast to index futures, index options give the purchaser the right, in return for the premium paid, to assume a position in an index rather than to take a position in an index, as is required in a futures contract, at a specified exercise price at any time during the period of the option. Upon exercise of the option, the holder of the option will receive the accumulated balance in the seller's "margin" account, which represents the amount by which the market price of the index, at exercise, exceeds (in the case of a call) or is less than (in the case of a put) the exercise price of the option on the index.

Since the introduction of the first index derivative instrument in 1982, there has been a proliferation in the number on such instruments being traded in the United States. (See Figure 1.) The S&P 500 is by far the most popular index future and the S&P 100 the most popular index option.

Fig. 1: Index Futures, Index Options and Options on Index Futures Traded in the United States

Index Future	*Exchange*
S&P 500	CME
NYSE Composite	NYFE
Major Market	CBT
Russell 1000, 2000 & 3000	NYFE
S&P OTC 250	CME
Value Line	KCBT
Index Option	***Exchange***
S&P 100	CBT
S&P 500	CBT
Major Market	AMEX
NYSE Composite	NYSE
Beta	NYSE
Value Line	PHLX
Computer Technology	AMEX
Oil	AMEX
Airline	AMEX
Gold/Silver	PHLX

C. The Use And Users Of Stock Index Options And Futures

The stock index futures and options are routinely used by securities dealers, investment bankers, insurance companies, and pension, trust, endowment and mutual funds. Since futures trading by these entities is done principally in connection with stock market activity, it is useful to describe briefly trading strategies using index futures and options. Without the use of index futures and options, an investor in equities could manage and control his portfolio against a market decline in three ways. The investor could (1) diversify his portfolio, (2) use stop loss orders, and (3) use stock options. All these strategies involve the purchase and sale of securities.[21]

Index futures and options are commonly claimed to offer four essential advantages over the use of securities to manage and control a portfolio. First, index futures and options offer transaction costs that are between 5 and 10 percent of those for trading in securities. (See Figure 2.)

Fig. 2: Comparison of transaction costs associated with trading a $120 million portfolio of equities and index futures.

	Basket of Stock Underlying S&P 500	*S&P 500 Futures*
Volume	2.3 million shares	800 contracts
Cost per unit	7 cents per share	$12.50 per contract
Total cost	$161,000	$10,000

(Source: Morgan Stanley, *Program Trading*, October 8, 1987)

Second, index futures and options contracts provide for immediate implementation of an adjustment in an equities position, in contrast to the more burdensome transfer of each stock of the underlying basket. An investor would merely have to buy or sell a relatively small number of index futures options contracts rather than buy or sell large blocks of securities in the firms that comprise the index (500 in the case of the S&P 500). It is estimated that a futures transaction can be accomplished in 30 seconds or less, while it could take 2 to 3 minutes to unload a block of stock at a reasonable price.[22] Third, margin rates are approximately 10 times less for index futures than for securities. The margin rate for stock traded in the indices, that is, the amount a party has to put up to enter into the transaction, is 50 percent of the value of stock purchased, while the margin rate for index futures has been approximately 5 percent of the value of the futures contract.[23] Fourth, index futures and options have generally lower market impact costs. (See Figure 3.)

Fig. 3: Market Impact ($120 Million Portfolio)

	S&P Portfolio			*S&P Futures*		
	Last	*Bid*	*Ask*	*Last*	*Bid*	*Ask*
Market	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Spread		1.20			.05	
Dollar value		[illegible]			[illegible]	

(Source: Morgan Stanley, *Program Trading*, October 8, 1987)

Thus, an investor interested in the broad market could use index futures and options, rather than securities, as a cost-effective means to track recognized market barometers such as the S&P 500. Instead of buying stock in a number of companies representative of the market, a bullish investor could purchase index futures and index call options. In contrast, a bearish investor, rather than selling stock, could sell index futures and index call options, or buy index put options.

Index futures and options can also be used in a manner that allows an investor to concentrate on the fundamentals of choosing an investment in individual stocks without concern for diversifying his portfolio to protect himself from a broad market decline. All that the investor would have to do is sell an index future or purchase an index put option. If the market declined, the investor would receive an amount in cash from the index future or option to compensate for the broad market decline, while he could still hold onto the stock that he deems to be a sound investment. If the market rose, the gain in the value of the stock would offset, at least to a degree, losses in the index future or in the index put option. The investor has, in effect, hedged against the volatility of the broad market for his specific investment.

Moreover, a pension fund manager could use index futures as a temporary substitute for equities. Instead of being actively involved in index derivative instruments, the fund manager could use index futures as entry/exit positions. For example, a fund manager bullish about the market but not having sufficient funds to buy large blocks of stock because of the cash flow of the fund could use index futures as an entry position to lock the fund in the market at today's prices. Similarly, the fund manager could reinvest dividends received from stock into index futures until he has sufficient funds to liquidate his futures position and purchase stock.

An investor wishing to trade several blocks of stock may go to discount brokers to sell those stocks for which there is a ready current market and seek to sell less liquid stock through investment bankers. The investment bankers would be able to hedge market movements by buying futures and thus buy time to sell the block. Again the hedge is a useful convenience, which indirectly contributes to the liquidity, and therefore the price, of the block. Index futures and options are also used in complex "program trading" strategies such as "portfolio insurance" and "index arbitrage," which are discussed in some detail later.

Futures are cheaper to use than stocks and, accordingly, are used much more extensively. Perhaps one point is worth noting: futures are undoubtedly useful, and in fact are used for the purposes indicated above. And they are represented as "hedging" devices, which of course they can be. But they are also powerful instruments with which to speculate in short-term market movements.[24] While the index in theory represents the price of the underlying stocks, it can be a major factor in determining them. Since trading futures is considerably faster, cheaper and far more leveraged than trading in the underlying stocks, it is a far better instrument of speculation in the market as a whole than are the underlying stocks. In fact it has opened up, for better or for worse, speculation in market movements that was not economically feasible in the past.

D. The Growth Of Index Futures And Options Contracts And Present Measures Of Volume

Since their introduction in 1982, index futures and options contracts have grown phenomenally and have become among the most successful exchange products ever introduced. (See Figures 4A and 4B.) In 1986 stock index futures accounted for 14.35 percent of all domestic futures contracts trading, and stock index options accounted for 6.87 percent of all domestic options trading.[25] The growth of specific index futures is shown in Figure 5.

Fig. 4A: The Growth of Index Futures in Contracts Traded

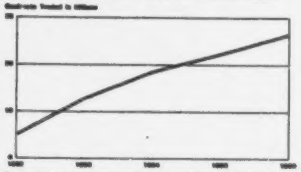


Fig. 4B: The Growth of Index Options in Contracts Traded

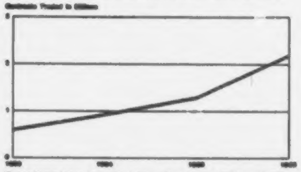
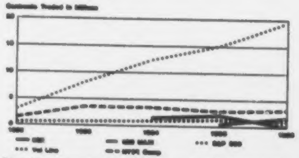
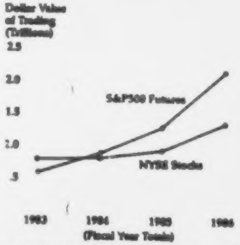


Fig. 5: The Growth of Particular Stock Index Futures in Contracts



The S&P 500 stock index future has become so popular that its total daily dollar volume of trades is greater than one and a half times that of the NYSE.[26] (See Figure 6.)

Fig. 6: Comparison of the dollar value of trading between the S&P 500 and the New York Stock Exchange.



(Source: John Merrick, *Business Review*, Federal Reserve Bank of Philadelphia, October 1987 at 19.)

E. Global Aspects Of Index Futures And Options

The success of index derivative instruments in the United States and investor demand in world markets for such instruments fostered the development of index futures and options that track stocks listed on foreign exchanges. (See Figure 7.)

Fig. 7: Foreign Index Derivative Instruments

Futures Contracts	*Exchange*
Australian All Share	Sydney Futures Exchange
Financial Times 100	London Intl. Futures Exchange
Hang Seng	Hong Kong Futures Exchange
Nikkei 225	Singapore Intl. Monetary Exchange
Toronto 35	Toronto Futures Exchange
Barclays Share Price	New Zealand Futures Exchange
Osaka Stock Future 50	Osaka Stock Exchange
Topic	Tokyo Stock Exchange*

Options Contracts	*Exchange*
Australian All Share	Sydney Stock Exchange
Financial Times 100	London Stock Exchange
Toronto 35	Toronto Stock Exchange

(*This contract is scheduled to begin trading in the Spring of 1988.)

Trading in these foreign index futures and options is currently confined to institutions seeking to protect themselves against losses on foreign securities portfolios or to bet on the direction of foreign stocks. A number of exchanges in the United States are waiting for CFTC approval to trade some of these foreign index derivative instruments. Furthermore, a number of United States exchanges are currently developing international indices that will track stocks in a number of the world markets.[27] In response to Black Monday, however, the CFTC has placed a temporary freeze on the approval of new stock index future contracts.

F. Program Trading

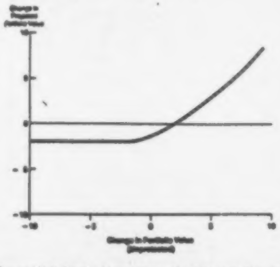
From our discussion of derivative instruments we now turn to the trading strategies that these instruments have made possible, strategies that are at the heart of what has come to be understood as program trading. Broadly defined, "program trading" is nothing more than buying or selling several stocks simultaneously on a stock exchange. Moreover, computers are now programmed to specify the stocks to be bought or sold at "market" price, and the various exchange members can use their computers to execute the trade through the NYSE's Designated Order Turnaround system ("DOT").

Obviously, simply selling or buying several stocks simultaneously should not raise any concerns in and of itself, nor should the use of computers in doing so. The problem, if there is one, lies in the fact that most such trading appears to be simply reactive to what is going on in the trading of index futures. Before trying to examine whether or not there is a problem, it is essential to understand the two significant areas in which program trading occurs, namely, portfolio insurance and index arbitrage.

1. *Portfolio Insurance*

Portfolio insurance, also known as "dynamic hedging," is a term used to describe an investment strategy that, if successful, would permit a fund manager to protect the fund's portfolio from losses resulting from declines in the market while also preserving most of the upside potential. This strategy involves the gradual sale of stock in a declining market and the purchasing of stock in a rising market in accordance with a computer program designed to accomplish these results. Another and broader use is "tactical asset allocation." Here a mathematical formula is used to allocate a fund's assets in an optimal manner, depending on the fund's objectives and investment philosophies, between the equity, bond and cash markets to achieve at least a minimum rate of return, regardless of how such markets are performing. Stock index futures in the case of portfolio insurance—stock, bond and Treasury bill futures in the case of tactical asset allocation—allow fund managers to make portfolio shifts quickly and at lower cost than for buying and selling securities. Portfolio "insurance" is not insurance literally in the sense that a home is insured by an insurance company in the event of fire. It depends on how successfully the fund manager can execute the strategy, which, of course, depends upon having buyers at the relevant prices. In other words, portfolio insurance is akin to fire insurance which the insured seeks to obtain only when he first smells smoke.[28] (See Figure 8.)

Fig. 8: The goal of portfolio insurance—setting a floor on the value of a portfolio while retaining the potential for appreciation.



(Source: Mark Zurack, Presentation to the FBIV 1987 Derivative Seminar, Goldman Sachs).

Prior to the introduction of financial futures, managers of large funds found it expensive to attempt to make rapid shifts in exposure to ride out short-term market movements. Financial futures and computers allow, in theory, for rapid shifts in market exposure. For example, a fund manager with a portfolio consisting of 60 percent equities, 25 percent bonds, and 15 percent cash, observing a decline in the equities markets, would be alerted by a computer to shift portfolio asset allocation to 58 percent equities, 25 percent bonds, and 17 percent cash. The fund manager could achieve this objective by selling stocks and buying Treasury bills, but the low transactions costs associated with futures and options make them a more viable trading vehicle. Thus, without touching the fund assets, the fund manager could quickly achieve this exposure shift by selling index futures. The fund manager could then, over time, sell the necessary of amount of stock while liquidating the futures positions. If the equity market rebounds, the fund manager will suffer a loss on the index futures contract; however, that loss would be offset by the increase in the value of stock still owned. Similarly, the fund manager could adjust his cash position by purchasing T-bill futures. Should the market keep falling, more stock index futures would be sold and T-bill futures purchased.

Portfolio insurance obviously is only a greatly accelerated version of normal portfolio management, that is, allocation of resources between equity and fixed term investments in an optimal way. The principal difference is that it follows the market rather than seeks to anticipate market developments. In other words, the portfolio insured sells equities when the market declines and buys them when the market advances. In a sense, portfolio insurance is an automated version of a limit order program or programs on the down side and comparable buy programs on the up side. If the buys and sells can be made at the "trigger" prices prescribed by the program, that will give the pension fund manager the best of all worlds at relatively small cost.

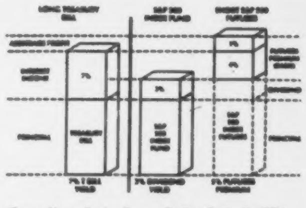
2. *Index Arbitrage*

Classic arbitrage is as old as the financial markets and involves profiting from price disparities of an asset, say, XYZ Co. stock, that trades in more than one market. An arbitrager would profit by selling XYZ Co. stock in the market that has the highest trading price, while simultaneously buying XYZ Co. stock in the market that has the lowest trading price. This arbitrage activity, through its impact on stock prices in each market, would eliminate or narrow the price disparity—decreasing XYZ Co.'s price in the higher-priced market and increasing XYZ Co.'s price in the lower-priced market. Arbitrage is "riskless," in that both prices are known at the time of trading, and it profits from market inefficiencies while contributing to their ultimate efficiency.

Index arbitrage is similar to classic arbitrage. It involves profiting from price disparities between the index futures, index options and the basket of stock underlying the index. If the index future trades at a premium over the underlying stocks, an arbitrager would sell index futures and buy stock (long index arbitrage). For example, if the S&P 500 Index was trading at 240 and the S&P 500 Index futures contract was trading at 250, an arbitrager would sell index futures and buy an equivalent amount of the basket of stock underlying the index in the proportion that the stocks are weighted in the index.[29] Once he has executed his buy and sell, he has locked in his profit and is totally indifferent to the price of either the index or the basket of stocks; the two prices, high or low, will be equal at or before expiration. Thus, regardless of the value of the index future at expiration, the arbitrager would derive a profit of $5,000 ($500 multiplied by the 10-point gain) per contract.

If the index future traded at a discount to the basket of stock, an arbitrager could buy the index future and sell the basket of stock (short index arbitrage). However, this type of arbitrage is not as common because often the would-be arbitrager does not hold the basket of stock. To take advantage of this arbitrage opportunity, the arbitrager would have to sell stock, and if he did not own the stock as an investment, he would have to sell short (selling stock that one does not own). Since Securities Exchange Act Rule 10a-1 prohibits the short sale of stock on a "down tick," that is, when the bid price is lower than the last reported trading price, an arbitrage which requires a short sale is more difficult to implement.

Index arbitrage strategy could also be viewed as the creation of yet another "synthetic money market instrument." Since an arbitrager is engaged in a riskless transaction, he would want a return offered by this index arbitrage strategy to be at least equal to that offered by a riskless investment such as Treasury bills. But as the yield offered by Treasury bills is included in the value of the index futures contract[30], the arbitrager, after implementing the index arbitrage, would just have to wait for the index futures contract to expire, at which time the arbitrager would sell the basket of stock and receive a yield at least equal to that offered by Treasury bills.[31] This synthetic money market instrument would outperform any comparable risk alternative if the arbitrager sold the futures contract at a price higher than its theoretical value. (See Figure 9.)



(Source: Morgan Stanley, *Program Trading*, October 8, 1987.)

If at expiration the index is unchanged from the time when the arbitrager implemented the strategy, a profit equal to the yield on Treasury bills will be made from dividends received on the stock held and the gain on the index future caused by premium erosion. The same bottom-line result would occur if the market moved. If the index rose, profits in the portfolio of stock would be offset by losses in the futures contracts, while a decline in the index will result in the same profit because losses in the portfolio of stock would be offset by profits in the futures contracts.

G. Measures Of Program Trading

With the basic mechanics of program trading outlined, we now attempt to provide some useful measures of the extent of this new phenomenon. In addition, we also have tried to identify the major participants in this area.

1. *Aggregate Volume Of Trading*

Trading in blocks of securities comprises a significant percentage of the volume of trades on the New York Stock Exchange; and, as previously discussed,[32] large block trading of 10,000 or more shares accounted for nearly 50 percent of all shares traded on the New York Stock Exchange in 1986.[33] Volume related to the simultaneous sale of securities and stock derivative instruments, however, is not that easily determined. Trading in index futures is confined to the "public outcry" of the pits, and there is currently no way of ascertaining whether the buy or sell order is related to index arbitrage, portfolio insurance, or some other investment strategy.

Obtaining a reliable measure of the volume of program trading on the NYSE has also been difficult until recently. Originally, the only way to execute a program on the NYSE floor was for member firm floor brokers to walk the orders around to the appropriate specialists. The inefficiencies associated with this manual delivery system, as well as member demands for a quicker method of executing these trades, led the NYSE to develop the DOT system in 1976 and an improved version called Super-Dot in 1984. This computerized trading mechanism allows brokers of member firms to enter a trade into the firm's computer at an office away from the NYSE itself. As soon as the DOT system receives the order, it sends it to the appropriate specialist. The whole process takes a matter of minutes. As soon as the specialist executes the order, it then is confirmed to the computer of the member firm, and an adequate paper trail of the transactions is generated. Program traders have for a long time realized the benefits of using DOT to buy and sell a large number of different securities. The exact proportions of stocks are placed into their computer in advance, and when the time comes, the entire program can be sent to the respective specialists on the floor through the pushing of buttons.

In response to the volatile swings on the NYSE on September 11 and 12, 1986 and January 23, 1987, and increased Congressional and public concern that program trading was responsible for such volatility, the NYSE asked its members to identify program trades made through the DOT system. Moreover, to determine what percentage of program trades were being made through the DOT system, the NYSE polled specialists and floor traders on a daily basis as to what firms sent program trades around the floor. The NYSE found that at least 95 percent of all program trading was performed through the DOT system. Only one firm, because of inadequacies in its own computer system, consistently sent program trades over the counter.

Thus, since virtually all program trades are performed via the DOT system, data derived from the DOT system provide a good measure of the extent of program trading.

The volume of program trades[34] as a percentage of DOT market orders varied from a low of 4.48 percent on March 10, 1987 to a high of 55.63 percent on June 19, 1987 (a "triple witching" day). On average, the orders from program trading accounted for 18 percent of DOT market orders. On Black Monday, October 19, 1987, program trades accounted for 28.1 percent of all DOT market orders.

Program trading as a percentage of the volume of shares traded varied from a low of .86 percent on March 10, 1987 to a high of 19 percent on June 19, 1987. On average, the volume of program trading amounted to approximately 4 percent of share volume, while on Black Monday program trading accounted for approximately 7 percent of share volume.

2. *The Participating Firms And Major Players*

Both index arbitrage and portfolio insurance require large amounts of capital for them to be profitable. It is estimated that at least $5 million is necessary for index arbitrage and that $25 million is a more reasonable figure.[35] Portfolio insurance by its very nature is used by large pension funds. Index arbitrage and portfolio insurance are thus not viable strategies for most individual investors.[36] The benefits of such trading strategies flow directly only to institutional investors such as brokerage firms, pension funds, mutual funds and insurance firms.

The NYSE has determined that 26 brokerage firms execute program trades for their own and/or client accounts using the Exchange's Super-Dot computer,[37] four firms use their own version of the Super-Dot system,[38] and one firm consistently goes directly to the Exchange floor.[39]

There are no solid data on who uses index arbitrage. However, because of their low transaction costs and the need for quick access to market information, the large brokerage houses usually engage in index arbitrage for their own account.

It is estimated that prior to October 19, 1987, the dollar value of portfolio insurance in the stock index derivative markets was somewhere between $50 and $100 billion dollars, probably closer to $100 billion. Its users include pension funds, index funds, endowment funds, insurance companies and mutual funds, with pension and endowment funds being the largest users. The leading funds executing portfolio insurance strategies for such entities include Leland O'Brien Rubinstein Associates, Aetna Life and Casualty Co., Putnam Adversary Company, Inc., Chase Investors Management Corp., J.P. Morgan Investment Management, Wells Fargo Investment Advisors, and Bankers Trust Co.[40]

Having covered the mechanics and incidence of program trading, we now turn to the regulatory context in which this phenomenon occurs. In many ways, that structure has come down largely unchanged from the New Deal, with the notable exception that the futures regulator has become an independent agency. Here the divided character of regulatory oversight will be analysed as well as the problems of public confidence that may be inherent in the present governmental structure designed to regulate two closely related markets.

IV. THE PRESENT REGULATORY FRAMEWORK FOR SECURITIES AND STOCK DERIVATIVE INSTRUMENTS

Stocks and their shadows (stock options, index futures, index options and options in index futures) are all inextricably linked and influence one another. Stock derivative instruments, by their very nature, owe their existence to the stock markets and move approximately in tandem with the prices of the stocks comprising the index.[41] However, even though these instruments are closely entwined, there are incompatible structural and regulatory forces that create an inherent tension between such instruments, which may tend to destabilise the stock market and thus undermine public confidence in the markets. The inherent tensions are twofold. First, stock markets are structured to ensure a "fair and orderly" market, while the futures markets are structured to be "open and competitive." Second, stocks and stock derivative instruments fall within the regulatory purview of two distinct federal agencies—namely, the SEC and CFTC—resulting in differing market regulations and standards for public protection.

A. Market Structures And Economic Purposes

The securities markets perform an essential and vital function in the United States and world economy by providing a vehicle for industry to raise capital. On the other hand, persons purchasing stock of a company do so for investment purposes, believing that they will achieve a satisfactory rate of return through dividends and stock appreciation. Equity capital is raised in what is deemed the "primary" market (new-issue market): companies issue their securities to the public through syndicates of dealers and underwriters. For the sale of a new issue of stock to succeed, however, prospective purchasers must have a reasonable expectation that they can sell such stock at a later date. Thus, crucial to the effectiveness of the primary market is a liquid and orderly trading market that attracts and brings the buyers and sellers together. This market is referred to as the "secondary" market.

Secondary markets provide a place, under organized rules and procedures, for buying and selling securities that have been admitted to trading. The NYSE, which remains the preeminent secondary market, uses specialists who attempt to keep an orderly market when order imbalances arise, in return for being granted a monopoly on the Exchange floor in the trading of a specific stock. This monopolistic position has not been without its critics. When a stock is admitted to trade on the NYSE, it is allocated to a particular specialist who, in addition to being required to keep an orderly market in that stock, is also required to keep limit order books (i.e., a record to liquidate positions if the market moves in a certain way).[42] If an order cannot be executed at a price reasonably close to the price of the preceding sale, the NYSE requires the specialist to create a continuous market by trading in the stock for his own account using his firm's own capital. The specialist thus serves the role of ensuring liquidity in the market as well as cushioning sharp price fluctuations. Moreover, having the specialists perform these functions creates rational expectations that prices normally will move gradually—at least more gradually than might otherwise be the case. This specialist system has proven reliable even in the face of Black Monday.[43]

Conversely, the stock derivative markets, and the index futures markets in particular, serve the economic utility of shifting risk onto those persons willing to assume the risks. Unlike stock, stock index futures have no primary market; their only market is similar to the secondary market—bringing "longs" (buyers) and "shorts" (sellers) together. In contrast to the NYSE, which uses a specialist to create an orderly market, futures contracts are traded in the "open outcry" of the pits, where a number of professional traders compete with each other to create a market. Futures traders have no obligation to keep an orderly market if order imbalances occur, and they can stop trading at any time, but they do add liquidity to the market. Prices of futures can thus move in a more volatile and discontinuous fashion than stock prices, but need not do so if competition is vigorous.

The different trading philosophies between the NYSE and futures exchanges create an inherent conflict in the pricing of such instruments, especially in panic scenarios.[44] Since the NYSE seeks orderly price fluctuations and the futures exchanges rely on competitive factors to determine prices, prices of index futures may move faster than stock prices. Thus the more the specialists intervene to retard stock price declines, the greater the price disparity between the futures and cash markets that will result. The only party benefiting from the price disparity caused by structural differences in the markets is index arbitragers. Index arbitragers will step in and buy (sell) in one market and sell (buy) in the other market, thus narrowing the price disparity between the markets. This, it is said, makes the market more efficient—undoubtedly true, since the arbitrage opportunity was, by definition, created by market inefficiencies. However, the different trading philosophies of the respective exchanges create conflicting pricing mechanisms that by their very nature will always be discordant. In short, there will always be the opportunity for index arbitrage. But since the only persons able to take advantage of index arbitrage are investment bankers, the investing public could perceive that the market favors a select few. Indeed, the press criticisms of "improper trading" and "triple witching hours" tend to fuel this perception.

That is not to say that index arbitrage is bad or that the "fair and orderly" trading method of the NYSE is better than the "open and competitive" nature of the futures exchanges, but only that different modes of operation may result in more price discrepancies and hence more arbitrage than would otherwise be the case.

B. Federal Regulation: The Existence Of Two Agencies For Interrelated Markets

The existence of two federal agencies regulating such interrelated markets as the stock exchanges and the index futures and options markets can best be understood in the apt words of Justice Holmes: "[U]pon this point a page of history is worth a volume of logic."[45] Despite the good faith efforts of the agencies to cooperate on policy and regulatory matters, differences persist and would in all probability be more pronounced but for the prevalence of deregulation. Even so, it is reasonably clear that there are differences of philosophy as well as the now familiar concerns over "bureaucratic turf." For whatever reason, and history probably plays a large part, the SEC tends to be more conservative and cautious in its approach than the CFTC. Differences are also aggravated by the fact that the oversight function is divided in the Congress. Again, despite the good-faith efforts to cooperate, differences persist. This political structure also complicates efforts of consolidation and reform.

It makes absolutely no sense today to have closely related financial markets subject to split regulatory control. While there is no disaster that has yet resulted from this split, the potential for one is clearly present. Even in an era of relative deregulation, the potential for regulation if necessary, the assurance of consistent standards of conduct and supervision, and the capacity to act expeditiously in times of crisis are important to maintaining public confidence in markets. Problems arising from different modes of operation, different "margin" requirements, and different "short sale" rules cannot always be successfully untangled, nor should they be. Fear that the SEC would regulate too severely is not of itself sufficient reason for maintaining a separate regulatory agency with a more liberal philosophy. Yet, one suspects, the CFTC owes its political existence to little more than that difference, plus history.

An additional reason for consolidating the two agencies lies in the increasing internationalization of markets. If the United States wishes to create level playing fields for exchanges to compete, it is important to have one regulatory agency speak for it on regulatory matters. With the FRB and Treasury already heavily involved, there is no reason to complicate matters further by the presence of two regulatory voices where one will suffice.

1. *Products Of History: The SEC And CFTC Jurisdiction*

While federal regulation of the securities markets emerged from the Great Depression, federal regulation of the futures markets had existed prior to that seminal event. Abuses in grain futures and pressure from farmers and users of wheat led Congress to enact the Grain Futures Act of 1922, which aimed to prevent the recurrence of trading abuses. The Grain Futures Administration, a bureau of the Department of Agriculture, was given the responsibility for overseeing this new legislation. In 1936 Congress revamped the Grain Futures Act by replacing it with the Commodity Exchange Act, which regulated not only wheat futures but futures on other agricultural commodities. Another bureau within the Department of Agriculture—the Commodity Exchange Authority—was given the regulatory authority to oversee the Act. Since 1936, the Commodity Exchange Act has been amended a number of times; the most significant amendment being the CFTC Act of 1974, which established the CFTC. The CFTC Act of 1974 amended the Commodity Exchange Act definition of a commodity to include more than just specific agricultural products so that the newly formed CFTC would have jurisdiction over a growing number of non-agricultural commodities such as gold and foreign currencies. The CFTC Act, however, specifically provided that nothing in the Act should supersede or limit the jurisdiction of the SEC.

The jurisdictional conflict between the SEC and CFTC first arose in 1975 when the CFTC authorized the CBT to trade futures contracts on GNMA securities. This simmering conflict was further exacerbated in 1978 when the Kansas City Board of Trade petitioned the CFTC for permission to trade a stock index future, and it yielded a nearly four-year moratorium on the trading of stock index futures while the agencies struggled to resolve their differences. The jurisdictional conflict was resolved in late 1981 when SEC Chairman Shad and CFTC Chairman Johnson reached an agreement that gave the SEC exclusive jurisdiction to regulate options on financial futures and gave the CFTC authority to regulate financial futures and options on financial futures.[46] The "Shad-Johnson Accord" also established three basic criteria for index futures contracts: (1) Contracts had to be settled in cash; (2) contracts could not be susceptible to manipulation; and (3) the underlying index had to be broad-based. Despite some stiff criticism of index futures by vocal opponents, Congress enacted the Shad-Johnson Accord into law in 1982 in substantially the same form as proposed by the two agencies. The one principal addition by Congress was a provision granting the SEC the authority to disapprove an exchange's application upon a determination that the above criteria have not been met. *(See* 7 U.S.C. §2a.) Ironically, just as our consideration of program trading was almost, but unfortunately not quite, limited to the period of a bull market, Congressional review in 1982 occurred almost entirely during the trough of a recession.

2. *A Comparison Of SEC And CFTC Regulation Of The Securities And Futures Markets*

Given this regulatory demarcation, a thorough analysis of the SEC and CFTC regulatory frameworks would be extensive and beyond the boundaries of this study. However, to understand the disparities between these two regulatory frameworks and the resulting friction between regulations governing stock and stock index futures and options markets, it is worthwhile to look at the critical differences. These differences include price and position limits, margin requirements, and the short sale rule. Moreover, Black Monday makes it even more appropriate to address public concern that the current regulatory frameworks for both the securities and index futures markets may be inadequate to assure the financial integrity of the respective markets.

a. Price and Position Limits

Price and position limits are regulatory vehicles to ensure market integrity—both act as a means to curb volatility and market manipulation. The exchanges have the power to impose such limits subject to CFTC approval.[47] The relative exclusiveness of these constraints to the futures markets derives, in all probability, from the history of volatility in such markets.

Price limits establish price ranges in which a futures contract may fluctuate on a daily basis. In response to Black Monday as well as Congressional and public concern about stock fluctuations and excessive volatility, most exchanges trading stock index futures have enacted price limits.[48] Such actions may help public confidence by allowing clearing organizations and member firms to collect payments from traders on the losing side of the market as well as "cooling off" overreactive markets. But they do not get to the root of the problem

associated with program trading and stock market volatility—namely, that the markets are linked and that the index futures and options, because of their low cost, speed and leverage, have become the tail that wags the dog. Price limits are merely a means to close the futures market in the event of a large climb or, more likely, a large decline in the price of the index future. The obvious drawback is that price limits artificially prevent futures contracts from accurately reflecting the true value of the underlying cash markets. The CFTC has recognized this and has even sought public comment on their possible elimination.[49]

Price limits in the futures market without reciprocal price limits in the stock market shield one market from price fluctuations without correspondingly shielding the other. The effect is a disruption of markets that are inextricably linked; people will simply trade in the market that is open. Furthermore, price limits deny participants the opportunity to establish or liquidate futures positions when prices are at their applicable limit, and they exacerbate the misalignment of cash and futures prices unless stability is restored. For example, when the price of a daily contract reaches its limits, either up or down, no further trades can be made on that contract beyond the limit on that day. Further trading, however, may take place that day at the limit price or within the permitted price range established for that day. If prices should reach the down limit, and if there are no bids to buy at this price, a trader with a long position and wishing to sell cannot liquidate his position through a direct transaction. Under such circumstances, a trader can be literally "locked" in a market, unable to liquidate his position unless there is another trader willing to buy or sell, as the case may be, at the limit price. There is also enormous pressure to go elsewhere. Moreover, discontinuous trading between the futures markets and the NYSE, as a result of reaching a price limit in the futures markets, creates asymmetrical barriers to market access by tending to favor large institutions with quick access to such markets—or foreign ones—rather than the smaller investor. This results in public perception that the market favors a select few.

The futures exchanges have speculative position limits with exceptions for *bona fide* hedgers and arbitrage positions. We favor the use of position limits to protect the market against manipulation, but do not favor price limits because there are better alternatives to reduce speculative trading and, in turn, price volatility, such as requiring delivery in kind and revising margin requirements.[50]

b. Margin Requirements

Another key difference between the regulation of the trading in stock and futures is the amount of money that a player must put up, most commonly referred to as "margin," to enter into a transaction. Although the concepts underlying margin in the two types of transactions are quite different—namely, a credit function in securities transactions and a performance bond function in futures transactions—the leverage effect is the same in both markets.

In a securities transaction, the entire purchase price passes from buyer to seller at the time the trade is settled, usually five business days after the transaction. A purchaser of securities does not have to provide the full purchase price. Instead, he could borrow a portion of the purchase price. In that instance, margin refers in effect to the down payment tendered by the purchaser. The balance of the purchase price is provided in the form of a loan by the broker or a bank, for which the bank or broker charges interest.

By contrast, when a futures contract is entered into, the full purchase price for the underlying product does not pass from buyer to seller; a futures contract is a delayed delivery contract. Instead, both the buyer and seller of the futures contract are required to put up money (margin) to assure performance under the contract. Margin in this context does not represent a down payment but, rather, a performance bond that the parties will be able to meet their obligations. No money is lent, and consequently no interest is charged on the difference between the margin amount and the total value of the contract.

Regulation of margin in the futures and the securities markets differs markedly in two ways—the manner in which they are regulated and the amount of leverage afforded by the respective margin requirements. The 1934 Act directs the Board of Governors of the Federal Reserve System to prescribe margin rules and set margin requirements.[51] Pursuant to this directive, the FRB has adopted a number of regulations imposing restrictions on lenders of funds used to purchase securities.[52] Regulations T, U and G provide that the entities covered cannot extend, arrange or maintain credit of more than 50 percent of the purchase price of the securities. Since the agency lacks the jurisdiction to regulate foreign entities, the FRB promulgated Regulation X, which prohibits a person from borrowing funds overseas that would violate Regulations T, U and G.

These margin rules have three purposes: one assertedly related to the money supply, and the other two to control speculation and protect unsophisticated investors. The margin rules provide the Federal Reserve Board with an effective tool for controlling the amount of leverage that may be used in securities transactions and, ultimately, the ease with which speculation may occur. The margin rules thus provide the FRB with a means to prevent and control market fluctuations and help stabilize the economy in general.[53] Second, the margin rules protect the margin purchaser by making it impossible for him to buy securities on too thin a margin. In contrast, no federal agency promulgates rules or sets margin for futures contracts. Such responsibility is left to the futures exchanges.[54]

The margin amounts differ substantially between the two markets. In the securities market, one must put up at least 50 percent of the value of any stock purchased as an initial margin deposit.[55] On the other hand, in the commodities market, one often puts up less than 10 percent of the contract value as initial margin. Due to the small size of initial margin deposits, an FCM will reserve the right to require immediate deposit of an additional sum—known as a "maintenance margin"—in the event of an adverse market move. A maintenance margin call is generally issued when a customer's initial margin is depleted to the point where it reaches the maintenance margin requirement. For example, if the initial margin is $6,000 and the maintenance margin is $2,500, a change in the futures price that depreciates the value of the contract by more than $3,500 will provoke a margin call from the FCM.

If the customer fails to deposit the additional funds, his positions may be liquidated. In addition, on days when extreme market moves occur, brokerage firms may make intra-day margin calls requiring traders to deposit substantial amounts of additional funds immediately or also be subject to liquidation. It should also be noted that there are varying margin requirements, depending on what type of trader is involved. A speculator's margin requirements are generally higher than those of a hedger because a hedger can be expected to have increases in the value of his offsetting, or opposite, cash market position which correspond to any declines in value in his futures position. But these distinctions are not always appropriate, because it is often difficult to distinguish hedgers from speculators.

Consistent with our proposal of having one regulatory agency oversee these related markets, we would recommend that the FRB have the ultimate authority to set margins. At the same time, this does not imply that the FRB cannot delegate to the SEC, or even to the exchanges, the authority to set margin requirements.

c. SHORT SALE RULE

A final key difference between the futures and stock markets is the short sale rule. The Securities Exchange Act prohibits the short sale of securities,[56] subject to a number of exceptions: (1) below the last sale price of that security or (2) at the last sale price when that price is above the preceding different price.

The rationale for the short sale rule is twofold. First, it prevents short sellers from accelerating a decline in the market by exhausting all remaining bids at one price level, causing successively lower prices to be established by long sellers. Second, it prevents short selling at successively lower prices, thus eliminating short selling as a manipulative tool to drive down the market.

In today's market, we doubt whether the continued existence of the short sale rule is justified, other than perhaps to provide some investors with a semblance of confidence in the markets. The short sale rule favors price movement in the up direction and attempts to cushion it in a decline. It lacks logic but may help to discourage speculation in a down market. However, no such rule does—or even can—exist on the index futures exchanges, so at present the rule contributes to the tension between related markets.

d. FINANCIAL INTEGRITY OF THE MARKETS

Both the SEC and CFTC, along with the exchanges, ensure the integrity of their respective markets by regulating certain types of credit and financial risk—such as the capital requirements of brokers and futures commission merchants ("FCMs"), the insolvency of brokers and FCMs, and the misuse by brokers or FCMs of customer funds.

The SEC and CFTC prescribe net capital requirements for brokers and FCMs, respectively.[57] These requirements are intended to assure that brokers and FCMs are financially sound and have sufficient liquid assets to sustain market reverses without losses to customers. Those assets seem to have been sufficient to sustain the onslaught of Black Monday, though barely, and no large brokerage or FCM firm folded due to losses sustained on October 19, 1987. However, the SEC and CFTC are currently looking at capital requirements for brokers and FCMs, respectively, and are in a more advantageous position of assessing appropriate net capital requirements. Again public confidence is an important consideration.

SEC and CFTC regulations also provide an early warning system to identify firms experiencing financial difficulties.[58] The regulations require a broker (FCM) to give the SEC (CFTC) notice when its net capital falls to 120 (150) percent of its required minimum and when other specified conditions exist that could lead to capital impairment.[59] In addition to the early warning rule, brokers are required to file with the designated examining authority, on either a monthly or quarterly basis, a *Focus* report setting forth financial data. The *Focus* reports are an integral part of a program designed by the SEC and the securities exchanges to detect problems in brokerage firms prior to the time they result in serious violations of the net capital rule. Futures exchanges have instituted similar programs for financial surveillance of FCMs. Under these programs, FCMs file financial reports at least semi-annually. Brokers and FCMs' records are also subject to reasonable periodic, special, or other examinations by the SEC, CFTC, or the exchanges.

SEC regulations limit a broker's use of customer funds to assure that those funds are used only to finance customer-related transactions. The rule prohibits the use of customer funds in areas of the broker's business such as underwriting, trading and overhead. The rule has two major provisions. The broker is required to maintain physical possession or control over fully paid

excess margin securities carried for the account of its business, and the brokers can use customer securities that are not fully paid as "excess margin securities." Furthermore, brokers are also required to establish a special Reserve Bank Account for the exclusive benefit of customers and to deposit into that account the net amount of total customer credit over debits. If debits exceed credits, no deposit is required. In contrast, CFTC regulations prohibit FCMs from using customer funds and require customer funds to be segregated from the FCMs' own trades. Each FCM is required to complete its segregation requirements as of each business day by noon the following day. As such, it prohibits an FCM from commingling customer funds with proprietary funds and from using a customer's funds for any purpose other than to margin or guarantee customer trades.[60]

The manner in which client funds are protected in the event of broker or FCM bankruptcy or insolvency differs somewhat, but both seem reasonably adequate. If a brokerage firm goes bankrupt, an investor's funds in the securities markets are insured up to $500,000 per customer (no more than $100,000 can be a claim for cash). There is no equivalent commodity insurance for customer losses resulting from FCM financial failure or insolvency. One probable reason is that the CFTC requirement of 100 percent segregation of customers' funds provides substantial protection in the event of an FCM insolvency—assuming, of course, that they are segregated.

Brokers and FCMs also are required to comply with a myriad of record keeping and reporting activities, which help assure the completion and accuracy of client transactions as well as providing financial data to the relevant agencies and exchanges on how the respective markets are functioning.[61]

All things considered, current regulations assuring the financial integrity of the securities and futures markets would seem to be adequate. But public confidence might be further enhanced by consistent rules and regulations.

e. THE POWER TO CLOSE THE MARKETS AND THE NEED FOR A CONTINGENCY PLAN

We favor the existence of a clearly defined power to close the securities markets and derivative exchanges in a true emergency. Such a power should be used stringently and reserved for extreme situations such as the closing of the NYSE in response to the assassination of President Kennedy. In such a situation, the closing of the market provides a needed hiatus to sort through confusing and potentially catastrophic information. However, one cannot close the NYSE without at the same time closing the derivative markets, too.[62] Thus we propose providing the authority to one regulatory agency—namely, the SEC—to close all markets, but only in genuinely extreme situations. That scenario need not even be tied to world events and, for example, could conceivably include the serious malfunction of exchange computer systems on a heavy-volume day. With one regulatory authority overseeing this delicate function, we believe that the decision could be prompt, decisive and responsible.

We do not suggest that every time the market becomes jittery the solution is to close the market. The closing of the markets in and of itself runs counter to the free and continuous market principles behind such markets and could be a factor in making it more jittery. Moreover, the closing of markets, as evidenced by the closing of the Hong Kong market during the week of October 20 to 23, can result in a devastating loss of investor confidence. Investors feel locked into an investment they want to get out of and believe, rightly or wrongly, that market operations favor the big institutional investors and brokers who have rapid access to data and foreign markets and who can therefore liquidate positions before the small investor.

We suggest that the SEC, together with the FRB and the exchanges, put together a contingency plan to deal with another Black Monday. One, and probably the last, option should be the closing of the markets. Other strategies in the contingency plan may be similar to what Chairman of the Federal Reserve Board Alan Greenspan did by increasing credit available for market participants, and the SEC did in allowing companies to purchase their own stock. Such a plan should increase confidence in a market system that is suffering a tumultuous strain.

3. *The Need For One Agency To Regulate Interrelated Financial Markets*

From a policy perspective, it makes no sense to have two separate and distinct agencies regulating essentially the same markets used by the same persons for the same or related purposes. Such a regulatory structure undermines public confidence. When each agency regulates its respective market independent of the other, different and conflicting signals can be sent to market users. Moreover, in matters such as program trading where stock and stock derivative markets are used simultaneously, the existence of two separate and distinct federal agencies creates the potential for matters needing regulatory review and action to slip between the jurisdictional cracks of the agencies. Cooperation between the two agencies may alleviate but cannot cure the problem. Ensuring the integrity of the markets would best be promoted by a single regulatory agency.

We recommend that the SEC be given jurisdiction over *all* financial derivative instruments and that the CFTC continue to have jurisdiction over non-financial futures products. This recommendation is not based on any perceived inadequacies of the CFTC, but rather on the need for uniformity and consistency in the regulation of related instruments. Markets rest in large measure upon public confidence. Experience teaches that confidence is enhanced by the certainty of accountability; in other words, by the knowledge that responsible officials are easily identified and have their own clear responsibilities. Moreover, the rapid growth of new financial instruments creates the potential for the development of new instruments that will then be regarded as a hybrid between a security and some other financial instrument. This would merely exacerbate the problem of not being able to pinpoint authority in any specific agency. Second, since all financial instruments are tied into one another—they all respond to world macro-economic news and have a money-related function—the United States economy would be better served by having one agency oversee such instruments. In particular, such consolidation would contribute to the consistency with which American financial regulators would face a competing world.

V. A REVIEW OF "BLACK MONDAY" 1987

While we have included a brief review of October 19, 1987, our coverage is limited to relating that event to our larger concerns about program trading. Indeed, as we indicated at the outset, we offer no definitive wisdom on this event but only some very preliminary observations.

As a consensus formed that the DJIA high of 2,722 in August of 1987 was a market peak, temporary or otherwise, investor sentiment began to reflect an expectation that the market was due for a "correction." Concerns were voiced that speculation was fueling the markets with at least as much vigor as basic economic considerations, and newsletters sent out warnings that the record run-up of the industrial averages would soon begin to wane and adjust downwards. After all, price-earnings ratios were hovering at levels averaging 23 times earnings, an unusually high figure for a market better acquainted with ratios in the lower teens. Black Monday may simply have been that correction. The beginning hours of trading on that day showed a massive movement to sell. Apparently, a number of portfolio managers wanted to get out of equity investments. An explanation of October 19 can be deceptively simple: A downturn was expected, and when something that somehow fitted that description began to surface, everyone headed for the exits.

Perhaps the immediate cause of Black Monday can be found in the events of the preceding week. On the morning of Wednesday, October 14, 1987, news of an unexpectedly large U.S. trade deficit caused some nervousness in the financial community. As a domino effect began to take shape, an ensuing downward spiral in bond prices (thereby inflating the yields) was triggered by a rush to get out of equities and into debt instruments. Yields on U.S. long-term debt instruments soared into the double digits for the first time since 1985. The slide continued as the banking community announced a rise in prime lending rates. As expected, portfolio insurance programs kicked in, producing a further drop in stock prices.

On Thursday, October 15, 1987, stock and bond prices stood on fragile ground as Treasury Secretary Baker insisted that the turbulences were but minor events in a larger universe, that the rise in interest rates was an aberration, and that overall improvements in the economy were just around the corner. Nonetheless, block trades that had presumably been worked out "upstairs" in the wake of the previous day's results were brought to the floor at close for execution. While the eleventh-hour nature of such massive transactions was nothing new to a market grown accustomed to "triple witching hours" and index arbitrage, they probably increased the downward pressure on the market.

Then on Friday, October 16, the market opened with announcements that industrial production had risen by 0.2% in September and that the Producer Price Index stood at 0.3% above its previous monthly level. The bearish sentiments of the prior days, however, continued their momentum and were probably exacerbated by the fact that this particular day also happened to be an options expiration day. The DJIA slid a record 108 points, with trading volume hitting an all-time record of over 338 million shares. In short, the last three days of that week may have set the stage for Black Monday.

Over the weekend, October 17 and 18, Secretary Baker revealed that a dispute was brewing between the U.S. and the Federal Republic of Germany ("FRG") over the latter's interest rates. Unless the FRG cooperated to raise the mark, it was said, the U.S. would let the dollar fall further. The investment community's view of that confrontation was that a possible continued fall of the dollar would cause foreign investors to pull out of the U.S. markets.

On October 18, at 8:00 p.m. New York time, the Nikkei index in Tokyo was reported to have fallen by 2.6 percentage points. In the following hour, stocks on the Melbourne Stock Exchange fell immediately upon opening, and in Hong Kong the Hang Seng Index dropped 133 points in the first 40 minutes of trading. The following day, at 3:00 a.m. New York time, the London Stock Exchange opened to reveal a backlog of sell orders that had accumulated from the previous Friday. The London Financial Times Stock Index ("FTSE") opened off sharply. Nevertheless, at 7:00 a.m., American bond prices and the dollar were holding steady in Tokyo and London, pending the opening of the American markets.

The morning news also acknowledged that the U.S. had attacked oil platforms in the Persian Gulf as retribution for Iranian attacks on shipping in the area. Although this particular news item cannot be downplayed as insignificant, it did represent no major shift from recent news events. Nevertheless, by the opening bell on the NYSE, sell orders that had accumulated from overseas as well as wary American investors caused the DJIA to open 67 points lower than the prior week's close. Some 50 million shares were reported to have been traded in the first half hour. Amid the uncertainty, a 10:00 a.m. meeting of officials at the NYSE and leading brokerage firms produced a consensus not to halt trading.

In the meantime, the index futures markets in Chicago were undergoing a crisis of their own. Within a split second of the opening of the CME, the S&P 500 futures index sank 18 points, a fall that prompted the *Wall Street Journal* to lead off its next-day report with the blurb: "The Panic Began Here."[6] By 10:30 a.m., volume had already ascended to 140 million shares, with the Dow off yet another 34 points. At that time, however, the spread between the futures markets and the equity markets had grown so wide that arbitragers entered and buy programs kicked in. The market staged a turnaround and hovered at a temporary plateau, with the Dow down 101 points and volume at 154 million shares. By 11:45 a.m., the Dow reversed course and regained 95 points to climb back to 2130. Yet the exchanges were still beset by delays, the ticker tape was up to an hour late, and some stocks had not even opened yet because of specialists' inability to keep order.

The afternoon made painfully clear the full force and effect of the situation as traders were overwhelmed by waves of index futures selling, and a general selling momentum overtook the floor of the NYSE. By 2:00 p.m. the DJIA had fallen through the 2000 level and was still descending. Volume had already reached the staggering level of 400 million, and the first news of insolvency reached the teletype screens: H.B. Shaine & Co., a Grand Rapids, Michigan, firm could no longer cope. The finale, of course, was a 508-point loss (nearly 23%) on the Dow average, with volume at 603 million shares. The S&P 500 had suffered a worse fate, losing 80.75 points in the December Contract, or nearly 30% of its value. The ticker tape at the close was running at an unheard of 130-minute delay.

Only 20 minutes after the close of the NYSE, its chairman announced that the markets would be open for business the following day. Within minutes, additional comfort was supplied when it was disclosed that Treasury Secretary Baker had met with the West German Finance Minister and the president of the Bundesbank. An agreement had been worked out to keep currency exchange rates at current levels, and West Germany was undertaking to act in keeping its domestic interest rates from rising further. Meanwhile, experts were volunteering their near unanimous opinion that the debacle could not be expected to usher in a new Great Depression, because of safeguards set up long ago.

At 7:30 p.m. it was announced that the Hong Kong Stock Exchange was suspending trading for an entire week; and, by 8:00 p.m., it was revealed that in the first hour of trading on the Tokyo Stock Exchange, trading had stopped in all but three of the listed Japanese stocks. Tokyo remained open, however, and lost another 14.9% for the day.

The following morning, October 20, the Milan Stock Exchange opened one hour late, and trading was halted in some stocks as they lost 10% of their value. The momentum rolled over to the London Exchange where, at 7:30 a.m. New York time, the FT Index took a 304-point drop. It is largely believed that U.S. investors, unwilling to wait for the opening of the U.S. markets, were trying to sell shares in the British market.

At 9:00 a.m., or one-half hour before the opening bell on the NYSE, the FRB was busily sending its reassurances that it would provide all needed liquidity to preserve the markets. Chemical Bank and Marine Midland Bank dropped their prime rates to 9.25% from 9.75%. Meanwhile, the NYSE moved to curb program trading by calling for a stop to the use of its DOT system and hence dampened the ability to trade large blocks of stocks quickly. By 12:00 noon, trading in nearly 90 stocks was virtually halted on that exchange. The boost in liquidity and the increased stability brought about by more stringent control over market gyrations caused the Dow to rally 120 points and climb back to 1750. By 4:00 p.m. the DJIA closed at 1841.01, up 102.27 for the day, with a volume of 608 million shares, to top the already staggering previous day's record. Blue Chip stocks had rallied due to bargain hunting and corporate buyback programs, but smaller issues were battered. Treasury bond prices closed sharply higher as interest rates continued to tumble and the dollar, aided by signs of support coming from the major monetary powers, was soaring back upward. At 4:30 p.m. President Reagan calmed the nation by stressing that he would be willing to be more compromising on any budget proposals.

A reversal was showing promise by 9 p.m. as the Tokyo Nikkei average rebounded by 2037.32 points. At 9:30 a.m. on the next day, October 21, buy orders poured in from Europe and Tokyo as well as institutional and individual investors in New York. Lower prices led to a buying frenzy, and as the news of the market rises in Tokyo and London cheered the American markets, the Dow ended the day with a 186.89 gain, its biggest advance ever. The close at 2027.85 meant that more than half of the October 19 loss had been recovered. Interest rates had fallen again, and the dollar continued to rise.

By Thursday of that eventful week, it seemed that the worst had been averted and banks were still continuing to roll back their prime rates. Citibank dropped rates back to 9%, and other New York banks soon followed. Yet stocks fell back in volume trading. Heavy selling by foreigners may have helped fuel the drop, and the DJIA lost 138 points in the first 45 minutes of trading, only to rally slightly to close at a 77.42-point loss from the previous day. Meanwhile, the NYSE, citing an overwhelming backlog in paperwork, announced that it would close two hours earlier for the next three days. At 8:00 p.m. that day, President Reagan outlined his belief that the economic system was sound and working, and that he would give serious consideration to any budget proposals presented by Congress.

Friday the 23rd was unexpectedly calm. The DJIA closed with a paltry .33-point change over the previous day. The GNP was said to have grown at an annual rate of 3.8% in the third quarter versus 2.5% in the second quarter, while consumer prices were reported to have risen at a 2.1% compound annual rate for September. The .33 rise, however, was indicative of the 30 DJIA stocks only and concealed an overall drop in U.S. stocks that was probably triggered by a wave of panic selling in the final hour of trading on the Tokyo Stock Exchange. Nevertheless, a .33 movement ended an eventful week on an uneventful note.

No major unanticipated financial crisis or political event occurred on Black Monday or the days preceding it. The absence of such a crisis makes explanation more difficult, simply because it suggests a market fragility beyond our anticipation. To the extent the futures market with its huge daily volumes and claims to liquidity encouraged institutional investors to rely upon it as a quick escape from too much equity investment, it may have contributed to the quick fall of prices. The amount of program trading and additional selling by pension funds not directly triggered by portfolio insurance selling suggests to us that this may well have been the case. The simple truth is that, given the volume of funds in the hands of institutional investors, simultaneous decisions to sell will find no one on the buy side with comparable financial muscle. Nor should we expect such. The market works without major price moves only when investors are on both sides of trades and shares are trading at something close to fair value. As Keynes told us over fifty years ago, the fetish of liquidity is dangerous because "there is no such thing as liquidity of investment for the community as a whole".[illegible]

While Black Monday focused public attention on the operation of program trading during a major downturn, the larger question of the relationship between program trading and market volatility remains. In the next section we attempt to provide some observations on this subject. In addition, we also take up the issue of manipulation, another issue closely related to public confidence in the markets and sometimes associated with program trading in the public mind.

VI. PROGRAM TRADING, STOCK MARKET VOLATILITY AND MARKET MANIPULATION

A. Volatility: Evidence And Implications

The press and some investors have claimed that program trading and stock index related trading activity is responsible for wide daily swings in stock prices, especially on those days when the index futures and options contracts expire, in particular in the last hour of trading on such days, when index arbitragers unwind their positions, commonly referred to as the "triple witching hour."[illegible] However, recent studies on stock market volatility have not been able to attribute any specific observed changes in volatility to trading in index futures and options,[illegible] except on expiration Fridays. Our own review could find no relationship between any measure of volatility on a day-to-day basis and the intensity of program trading. While some of the high-volatility days are high program trading days such as Black Monday, when program trade orders accounted for approximately 7% of all NYSE orders, no general pattern is evident.[illegible]

B. "Triple Witching Hour" Volatility

Market volatility associated with the triple witching hour is the result of index arbitragers and traders who hold index contracts that settle based on closing stock prices and who seek to execute their orders at close to the last trade of the day in order to ensure that stock and derivative product portions of their position are valued at the same time by entering market-on-close orders. These orders brought in the final minutes of trading have resulted in order imbalances that caused dramatic market movement.

In a SEC roundtable discussion on index arbitrage on July 9, 1986, a number of proposals to dampen expiration day volatility were put forth by industry participants, but no consensus emerged.

Nevertheless, the SEC, CFTC, and the exchanges have taken heed of some of these proposals. The first initiative occurred in September, 1986, when the NYSE requested its members to submit all index-related market-at-close orders on December contracts in fifty selected stocks 30 minutes before the close of trading, so that the exchange could publicly disseminate the resulting net order imbalances. However, one large investment firm chose not to disclose its market on close orders, and thus demonstrated the difficulties of a voluntary request by the NYSE to dampen volatility.

In April 1987, the NYSE and CME agreed to alter the settlement valuation procedures of their index futures and options contracts so that they would be based on the

opening rather than closing prices of the underlying securities. The proposal was based on the belief that opening prices provided a greater opportunity for market professionals and investors to react to order imbalances and thus allow specialists more time to handle such imbalances. To accommodate the volume, the NYSE required that stock orders related to derivative index products be received at the Exchange one-half hour before the opening. The June 19 and September 18, 1987 expiration days passed without incident. Volatility at both the opening and close was negligible on both occasions.

C. Conclusions On Volatility

Putting aside the particular phenomenon of triple witching hour and perhaps October 19, there is no persuasive statistical evidence that the interaction of the two markets has caused any exceptional volatility on a day-to-day comparative basis, something referred to as "interday volatility." There has been some suggestion in the press to the contrary, but taken as percentage of value on the exchanges, the ups and downs would appear to be within historical precedent. There may have been some increase in the intraday volatility. Few statistical studies have been done in this area, but opinion and anecdotal evidence suggest that intra-day volatility may have increased. Yet, assuming intra-day volatility has increased somewhat, that problem—prior to the October decline—did not seem serious.

The problem of assessing all such statistical studies has been that the market itself has been on an upward trend since the futures markets came into being in 1982. As we have suggested, the existence of what was represented to be a rapid means of shifting out of equity in the index futures may have prolonged the bull market, especially as foreign investors joined in. Given the general unease about fundamental economic factors—particularly the U.S. budget and trade deficits—and the perceived overvaluation of the market, a major pullback in the market had been anticipated for some time.

If one thinks about volatility in the markets as they existed prior to computers or index funds or futures, it was clear that investors could adjust holdings in large amounts without great market impact, as long as they did not act simultaneously. Market makers have never had the wherewithal to stabilize the market where investors are all on the sell side. Of course not. The market will fall until investors cease to sell or begin to buy because they believe fundamental equity values are sound. Whatever new money—if any—futures have brought into the market, whatever liquidity they have added, they cannot sustain an orderly market indefinitely at inflated stock values.

Those who have expressed concern that program trading—more specifically, a combination of portfolio insurance and arbitrage—could, as the market turned down, lead to a "meltdown" may have had a valuable insight into the market relationships. The theory is, given some bad news adversely affecting the market, the automatic sells on the future exchanges would lead to arbitrage selling on the stock exchange, which would trigger more sells, etc. This may not have been far off the October 19 mark, although the drop was so rapid as to suggest that, following some initial influence on the market, the sells that were made in New York were less "insurance" selling than simply a large number of pension funds attempting to shift portfolios ahead of the crowd. In fact, it appears that many of the portfolio insurance funds stopped selling as the market rapidly fell.

Whatever role one chooses to assign to program trading, it can be fairly stated that the stock market appeared to be overpriced; that a number of economic factors caused investors concern about the immediate future; and that, for fundamental reasons, a number of institutions decided to divest equity shares for cash under the circumstances. The interesting question is why did so many come to this conclusion at the same time—particularly since there was in reality little economic news that was new, which had not been predicted for some time and which, one might have assumed, the market had not already taken into account in its prices.

One hypothesis is the one suggested in this paper. Too many investors remained in equity too long, then sought to be in the forefront of the escapees after the market downturn of the preceding week. There are reasons for their behavior. First, the pressure to get short-term results—to beat the market—penalized every pension fund manager who was conservative and began gradually to shift into cash well before October. Performance pressure leads to riding a bull market to its apex, which not everyone—indeed, very few—can do. And the existence of index futures, whether or not one joined an insurance program, led investors to believe the shift to cash could be accomplished quickly and inexpensively.

Second, the fall of the market on Thursday and Friday led a lot of investors to consider seriously the need to shift portfolios on Monday. When the futures market plummeted, partially because of automatic program sells resulting from Friday's market drop, too many institutions reacted to herd psychology.

D. Market Manipulation

Our study found no evidence of widespread market manipulation resulting from the existence of program trading or derivative instruments. At the same time, concern was occasionally expressed about certain trading practices that are denominated as "front-running." Moreover, while program trading itself cannot be said to have increased the opportunity for market manipulation, both common sense and historical experience teach that the existence of two related markets provides a broader playing field for abusive practices.[68] Furthermore, in the final analysis, market manipulation involves criminal conduct; we could not reasonably expect that such behavior would be easily exposed to an investigation lacking prosecutorial powers.

The NYSE appears to conduct a vigorous and sophisticated surveillance with respect to possible abuses in this area. In addition, the NYSE also attempts, with apparent success, to coordinate surveillance with the derivative markets in Chicago. Unfortunately, some questionable practices may fall in the gap between the securities and commodities laws and not be subject to exchange regulation. Such possible loopholes for market abuse merit careful review by Congress.

1. *Manipulation Of Index Futures*

A recognized concern with regard to manipulation has been the alleged ability to push an index future out of line with the "cash" price, by buying or selling in a thinly traded futures contract market. Thus a manipulator could begin selling the futures contract, causing "locals" (floor traders) to close out their short positions, thereby increasing existing price disparity between the futures and the "cash market." The existing disparity would invite an arbitrage that would buy the underpriced futures and sell the overpriced stock. With advance knowledge of this arbitrage, the manipulator would profit from being on the opposite side of the arbitrage.

While this scheme and similar ones cannot be ruled out *a priori*, the prerequisite of a thinly traded futures contract hardly exists with respect to the most popular contract, the S&P 500, at least on a regular basis. Indeed, those most familiar with the market, when asked, were virtually unanimous in the view that the price of that contract could not be moved in the manner described. There was, however, less confidence about other index futures contracts more thinly traded than the S&P 500 or representing a narrower selection of stocks.[69] In that connection a recent story in the *Wall Street Journal* for November 20, 1987 suggests that the sudden rise in the Major Market Index ("MMI") contract on October 20, 1987, the day following Black Monday, may have been the result of a manipulative scheme of the kind described above. Both the SEC and the CFTC recently announced that this matter will be investigated.[70]

The intermarket nature of this activity highlights the continuing need for coordinated surveillance. By the same token, of all the abusive practices discussed, such blatant manipulation is the least likely to find a safe harbor between the differing prohibitions of the commodities and securities laws. Indeed, aspects of the scheme would clearly appear to fit within the prohibitions against manipulation in Section 9 of the 1934 Act and Sections 6(b) and 9(b) of the Commodity Exchange Act, as amended (the "CEA"), 7 U.S.C. §§9, 13, and could be prosecuted under the criminal provisions of those statutes if not under the mail and wire fraud statutes, 18 U.S.C. §§1341, 1343, as well.

2. *Front-Running*

This term denotes a number of practices that have as their core component the assertedly unfair or inequitable misuse of non-public information about imminent transactions in one market to effect a profit in another. Among those interviewed, a few expressed concern about the possible incidence of this practice. Here, unfortunately, potentially abusive practices may fall within gaps in the existing regulatory structure.

The NYSE has taken a strong position against front-running as a violation of the prohibition in NYSE Rule 476 against unfair and inequitable trading practices. Indeed, the Exchange has recently submitted to the SEC for *Federal Register* publication an interpretation of NYSE Rule 476 that would apply the front-running prohibition to trading in index options based upon advance knowledge of a customer or proprietary block trade affecting the value of the index.[71] At the same time, the Exchange has not been able to regulate members' transactions in the futures markets.[72]

An investigation by the NYSE, which has been referred to the CFTC and SEC, identified facts suggesting that in connection with the December 19, 1986 expiration date, one major brokerage firm may have delayed execution of a customer's buy orders on the NYSE in order to effect a profit from the firm's long position in the December S&P 500 contract, which could have been put on with knowledge that the customer had placed a large buy order. The existence of this investigation and the occasional concern expressed to us about "front-running" suggest that this practice may well merit enhanced regulatory scrutiny and that the internal "Chinese walls" erected to guard against this and other practices by brokerage houses may need some repair. Given their stake in preserving customer confidence, the brokerage houses should be interested in minimizing the possibility of such a practice or even its appearance.

Furthermore, this situation highlights possible regulatory gaps. Thus front-running from the NYSE to the futures market would apparently not be subject to the NYSE's own prohibitions. Moreover, the futures markets themselves do not, as we understand, have rules that would directly prohibit this conduct. The statutory prohibitions in the commodity and securities laws may provide some deterrence. Thus, in the case of a brokerage firm that deliberately delays execution of a customer order on the NYSE to produce a price effect that will redound to the firm's benefit on the S&P 500 futures contract, such conduct would seem to violate the prohibitions against manipulation in both the 1934 Act and the CEA and could be prosecuted under the criminal provisions of those statutes as well as the ever-serviceable mail and wire fraud statutes. The difficulty, however, remains in determining the reach of statutory prohibitions tailored to one market when the manipulative conduct cuts across related markets.

A much more difficult question arises when transactions are made in the futures market based upon knowledge by a brokerage firm as to what the firm or its customers intend to do in the securities market, and no obvious manipulation such as intentional delay in executing orders takes place. Here no self-regulatory prohibition would appear to apply, and the reach of statutory prohibitions is far from clear.[73] On their face, the antifraud provisions in the securities laws would not seem to apply here.[74] The antifraud provisions of the CEA may apply, at least according to a position taken by the CFTC in the 1984 Options Study (see 1984 Options Study at VII-41).

Thus the problem of front-running across markets highlights the need for Congressional review of the divided regulatory structure. One solution to this problem would be legislation authorizing a self-regulatory prohibition of this practice that would extend to the futures markets. At a time when the Congress is grappling with the proper limits of the prohibition against insider trading, the related issue of intermarket front-running also should be addressed.

One final issue related to manipulation should be addressed, even though those interviewed expressed no particular concern about this matter.[75] As many commentators have recognized and the CFTC acknowledges, the CEA contains no prohibition against insider trading analogous to that in the securities laws. Thus someone who misappropriates information about a corporation that constitutes a major component of an index may, as matters now stand, use that information to trade on the futures markets with apparent impunity from civil regulatory action or criminal prosecution, with the possible exception of mail and wire fraud statutes.[76] Similarly, those who misappropriate confidential government information with broad market effect may utilise this stolen data to trade on a futures market, with the only regulatory deterrent being possible prosecution under the mail and wire fraud statutes following *Carpenter*, apart from whatever statutory prohibitions may be applicable to the improper disclosure of the information involved. These apparent gaps in the regulatory structure also merit scrutiny by Congress in addressing the issues surrounding a definitive proscription of insider trading.

VII. SOME FUNDAMENTAL CONSIDERATIONS

A. In General

Securities markets exist for the purpose of facilitating the infusion of capital into business or government. The creation and maintenance of markets in which equity or debt instruments can be quickly bought or sold facilitates investment and the allocation of new resources by ensuring that the instruments representing such investments can be bought or sold throughout their lives at their then current value. In a reasonably liquid free market, that value is competitively measured by the demands of many buyers and sellers for a variety of alternative investment vehicles. Thus the markets serve to allocate efficiently investment based on estimates of comparative returns after taking into account various risk and time factors—all as evaluated by the persons investing and as reflected in prices.

Despite all the changes which have taken place in the past two decades—the institutional nature of the investors, the many new investment instruments, the internationalization of the markets—these purposes remain valid today. The players are more sophisticated, computers measure the financial significance of information and small monetary differences quickly and accurately, and competition for savings and investment has become more international. Nonetheless, we are still talking about the efficient allocation of money into business and government, and we continue to depend upon competitive market forces to do so.

It also remains true today as in the past that the risks associated with the various investment instruments are both company (or government in the case of debt) dependent and market dependent. In the case of equity investment, the investor seeks to find opportunities in companies with growth potential where that potential is not already fully discounted in the stock price. That growth will, of course, almost certainly be influenced to some degree or another by the performance of the economy generally. Different companies will be differently affected by these macro-economic factors, and these predictions about the future behavior of the economy as a whole will influence these decisions.

What is true of equity is also true of debt instruments. The ability of a company (or a government) to meet its interest and principal obligations is a factor in determining and pricing risk. So too is that judgement influenced by macro-economic factors, which may more broadly affect ability to pay debt or what future payments may be worth in terms of present monetary values.

Finally, evaluation of debt vs. equity investment is also affected by predictions of future macro-economic events or trends. Today, because of the increasing internationalization of markets, these considerations tend to be more global than in the past. Competition for investors' money today extends well beyond national boundaries, particularly with respect to debt instruments and government securities, where the relevant information may be somewhat more accessible and the risks more easily assessed.

All investment involves some degree of risk, and that risk, in turn, is assessed in terms of estimates of the future. Investors, and particularly institutional investors who must comply with criteria of prudence in handling a portfolio, spread these risks in two ways. First, company-dependent risk—particularly equity—is spread by investing in several different companies. Second, macro-economic risk is traditionally "hedged" by dividing a portfolio in some proportion between equity and debt. Such proportions, again, will depend upon estimates of the future and tend to be altered, to some degree at least, by relatively short-term predictions about the economy.

All the foregoing is obvious and common knowledge. It is still the norm for investment, but there have been shifts of emphasis in recent years. The most important of these is the apparent desire of institutional equity investors increasingly to invest in the "market" and to place more value on "market" performance than upon the selection of stocks of particular companies.

To say this is not to say that professional investors have ceased to seek out equities that, in their judgment, are underpriced, because they clearly continue to do so. Perhaps the forces of competition among professionals make such potential "bargains" less common or, as in economic theory, the efficient market has eliminated bargains. Perhaps the enormous difficulty of "beating the market" with a large diversified equity portfolio has changed perspectives. Certainly the message of *A Random Walk Through Wall Street*[7] was discouraging in that respect, and most especially in the short run. A large diversified equity portfolio will, almost by definition, move with the market in the short term and may well do so for substantial periods of time.

This desire to invest in the "market" may, therefore, simply be the perception that having a diversified portfolio is doing so willy-nilly. Or, that fund managers tend to be judged, hired, and fired on their ability to equal or better the "market." Or, perhaps, that information is so freely available and competition so intense that each stock is perfectly priced by the market, and therefore it is only the market in which one can invest. There is no question that economic theory about "efficient markets" has greatly influenced current regulatory and investment perspectives, and is a major impetus to deregulation.

For different reasons foreign investors may also prefer equity investments in the market as a whole. They may feel less familiar with individual companies, competition in particular industries, management expertise and so forth. If they believe that macro-economics is generally favorable to economic growth in the U.S., they too may wish to invest in the market as a way of avoiding the risk-specific investments in particular companies.

If this desire to invest in a broad spectrum of stocks, however arbitrarily bundled together, is indeed a trend, it may over time have important consequences. With internationalization, some of these are political. If in macro-economic terms the Japanese or German economy is being better managed than that of the U.S., the money could be expected to flow to that equity market until, through the pricing mechanism, equilibrium is restored. The point is simply that this trend tends to make equity investment more general and less company-specific, and bring equity into closer parity with debt from an investment point of view, in the sense that evaluation of the economy as a whole is perceived to be the key. With respect to both, it is governmental policies rather than individual company behavior that become the principal point of attention.

It may also be that this desire to invest in a broad spectrum is largely reflective of the desire by institutional investors to move rapidly and efficiently from equity to cash, or cash to equity, in a significant fraction of a large diversified portfolio. An ability to take advantage of short-term market swings—and being successful at it—is one way of beating the market. In any event, buying and selling bundles of stock is far more frequent today, and the simultaneous selling of a bundle of stocks is a "program."

In the sense that some investment decisions have always been made with an eye on the economy in the near future, this trend adds little. What it does argue for is a product or products that efficiently permit such investment. Indices fit that description, and part of the popularity of index fund futures may lie in the fact that they are very liquid index funds, rather than that they are futures. There is economy and convenience in being able to buy or sell the "market" quickly and efficiently.

In addition, the investor who sought out the underpriced stock knew that he was investing for the long term; that may well have been a factor in its price. Investing in the "market" is, more often than not, investing in short-term swings. It is almost always macro-events which move the market as a whole up or down. At least in the short term, company earnings are more predictable than political events. Thus the price of particular stocks and portfolios, as a whole, moves with the market in the short term, and insofar as the market reflects (or anticipates) the economy as a whole, they are affected in the longer term as well.

The NYSE is organized to deal in individual stocks in order to facilitate raising capital for investment in particular business ventures. It has assumed that the performance of individual companies is what investors care about. That probably remains the most important investment objective of most investors. But trading in stocks individually still leads institutions today to holding large portfolios, which tend to mimic the market in the short term. The investor who wishes to change the proportions of his total investment portfolio from equity to debt, or vice versa, finds it convenient to trade in large baskets

of stocks. Today he tends to go to the futures markets or to negotiate a package trade off the Stock Exchange floor, with the resulting potential of a program of buys or sells on the floor shortly thereafter.

B. Public Confidence

Basic to preserving financial markets as efficient instruments for allocating investment is public confidence in their integrity: confidence that prices cannot be manipulated; confidence that the relevant information is equally available to all investors; confidence that savings will not disappear in a panic for causes not commensurate with economic fundamentals.

The Securities Exchange Act of 1934 gave broad powers to the Federal Reserve and to the Commission to ensure this integrity. Among its purposes were to protect unsophisticated investors; to forestall economic price fluctuations; to constrain, through margin requirements, diversion of borrowed money into stock market speculation; and, of course, to prevent fraud, broadly defined.

While we previously discussed some of these objectives in more detail, it is worth reflecting briefly on the problem of "speculation." In one sense, all investment is speculation—a bet that the investment will be worth more in the future than today or, from the seller's viewpoint, worth less—or, at least, worth less than an alternative use of the cash. So, to bring buyers and sellers together, one has to recognize both the existence and the worth of speculation to some undefined extent.

At the same time, investment carries the connotation of relatively long-term as against relatively short-term commitment of funds in the purchase of securities. Thus relatively large fluctuations in market price have been generally thought to be indicative of excessive speculation, that is, trading as a vehicle for making money on price differentials largely unrelated to the performance of a company or the market over a longer period of time. At the same time, the market requires for liquidity purposes a number of "speculators"—specialists, market makers, locals willing to temporarily take the other side until a buyer or a seller can be found. But, while such people make their living largely out of very short-term price fluctuations, their purpose—indeed, their obligation on the NYSE—is to help prevent large fluctuations. Large fluctuations, reflecting speculative activity on a larger scale, have been thought to discourage serious long-term investment by the general public.

There is no way, in a free market, of defining "excessive" speculation. But, historically, sufficient costs have been imposed on trading to discourage speculation by investors without discouraging investment at the same time. In other words, liquidity—the ability to buy and sell at a fair price without too great a gap between buyer and seller—was important. But some market efficiency (and some liquidity) was consciously sacrificed to prevent what was thought of as excessive speculation—undefined as that term has always been. Relatively high margin requirements were designed as much to discourage the unsophisticated investor as to protect brokers and other lenders. Relatively high fixed commissions and potential income or capital gains tax were another obstacle to too much churning of stock in the short term.

Today many investors are institutions that do not trade on margin. Commissions are no longer fixed and are substantially lower for large institutional trades. Many institutional investors pay no tax on gains. The value of trading on the futures exchange has grown much faster than the value of the aggregate stocks being traded has grown. Does this indicate excessive speculation? And does it make any difference today in view of the changed nature of the marketplace?

The answer to the first question is equivocal. But the answer to the second is reasonably clear, although it may not be for the reasons which concerned regulators in the past. It is not so much to protect the uninformed innocent from the blandishments of salesmen or even to protect lenders when their security shrinks. It is simply to remind that investors and speculators should have very different time horizons and that there is a difference in buying stock as an investment vs. simply taking one side of a wager.

Free market economists argue for deregulation as a means of making the market more efficient. Anything that adds to liquidity—that brings more money into the market—makes the market more efficient and is a good development. Speculators are welcome so long as they do not cheat and can meet their financial obligations; their money is as good as anyone else's.

This argument is widely accepted today. The theory is sound enough, but it may not work quite as well in practice. First, it may give the illusion of more liquidity than exists in fact. When the market goes down rapidly, speculators may drop out quickly. Thus the market may not be as deep as it appears on the surface. Second, is it no longer desirable to encourage investors to look at the longer term? Is it sound public policy to convert financial markets from focusing upon investment and longer-term profits into mechanisms for trading with an eye to the immediate trading profit? And third, does a frenzy of trading—often an indication of speculation—adversely affect public confidence?

Public confidence remains an important consideration, today not so much to induce the public to invest—although that importantly remains with us—as to convince both the voluntary and involuntary investors in the market that the professionals are not making fortunes at their expense. An increasing percentage of the public is retired, of senior status, and depending on investments—whether mutual funds, pension funds or personal savings—to supplement Social Security. Their confidence in the integrity and fairness of the market, not simply any potential insolvency, is important.

C. Derivative Markets In General

The use of derivative markets to hedge present values is, of course, their classic purpose—and indeed, the reason for their existence. It is to separate out the risk of market fluctuations as to price, over short periods of time for identical commodities, from other risks that such markets exist. And wherever derivative markets and cash markets exist side by side, there will be arbitrage opportunities to exploit price differences due to market inefficiencies and, consequently, force prices in line with one another.

In theory the difference between the cash price for a commodity and the price one, two, or three months in the future should be close to the carrying cost of buying the commodity today and selling it in the future. That, of course, is because in theory one can buy today and then deliver the commodity in satisfaction of one's commitment when it comes due. In fact, of course, speculators buy and sell futures and options contracts in the hope of making more out of the price fluctuations than a small increment over carrying costs.

On the face of it, stock index futures and options seem to be essentially comparable with commodity futures and options. Indeed they are treated similarly and presented as markets in which the risk of price changes can be hedged. All this is true enough, but there are differences, and in the context of the stock exchanges these differences may be important.

When one buys (sells) a share of stock or several shares of stock on the exchange, one is buying (selling) a share of ownership in a business enterprise. One may do so as an investor or as a trader—the difference being the time perspective. Each buys because he believes the value will increase, or sells because he believes the value will decline. Ordinarily the investor is thinking in terms of months or years; the trader, in minutes or hours. The function of the trader is simply to match investors—buyers and sellers—thus providing liquidity and "making" a market. As a general proposition, we know who the traders are because they hold themselves out as such. But there is nothing to prevent an investor from engaging in trading to whatever degree he feels appropriate.

But, in essence, it is this speculation by investors which the market has sought to discourage as "excessive." Because its function is to promote investment, it has sought, as we have noted, to preserve a long-term outlook. It has been thought to be a market for investment, not to promote short-term profits, and the speculator is there only to make a market, to provide temporary liquidity as investors come together.

Commodity futures markets are not predominently markets for long-term investment. Price variations are a part of the buyers' and sellers' expectation—indeed, the reason they invest in the first place. Commodity futures markets exist to permit the owners of commodities to hedge future price changes. The speculator assumes the price risk, leaving the farmer, the manufacturer, or the marketeer free to carry on his commodities business. They provide, in essence, a place for long hedgers and short hedgers to meet.

There is a second difference between the stock index futures market and the stock exchange and other futures exchanges: "cash settlement." On the stock exchanges people are buying or selling fractional ownership in business corporations—an ownership share which may fluctuate in value but which otherwise remains relatively constant. What is true on the stock exchange is, generally speaking, true on the commodity futures exchanges, whether the "commodity" is an agricultural product or a financial instrument or a currency. This is only to say that at the end of the day, no matter how many times one has sold and bought and sold again, someone ends up owning at least a future right to something—shares of stock, some British pounds, some Euro-dollars, some wheat in a warehouse. Indeed, the whole purpose of the "market" is to end up with this result: to provide a forum in which people can exchange real interests, thus giving a liquidity to those interests and promoting the exchange of goods or financial interests.

In the markets for stock index futures and options, one does not purchase or sell a basket of stocks but merely a contract reflecting the cash equivalent value of such a basket. If the value of the basket declines or rises during the term of the contract, one settles simply by paying or being paid the difference in cash. It is an exchange of promises to pay in cash the difference between the contract value and the value of the index at some specified future date.

At least two consequences of significance flow from the differences between stock index futures and options markets and the underlying exchanges: first, it is a market for trading price risk only, not the underlying investment, though it may serve the short-term trading needs or the convenience of investors as well; second, since it is cash settlement only, it is a very inexpensive and efficient market in which traders need relatively little capital to participate. Given its cash nature, all that is ever at risk is the sum necessary to cover market fluctuations in price; there is no underlying investment as there is in any market where settlement is or can be in terms of the commodity itself. If the only liability is the price differential, then it makes perfectly good sense to assure performance with modest good faith deposits of 5 to 10 percent, adjusted daily and coupled with the assets, also adjusted daily, of a clearinghouse. The result of such a low "margin" is tremendous leverage on the price of the stocks underlying the index. And this leverage is augmented by very low commissions and other costs, made possible in large part by the far simpler paperwork involved when paper representing promises rather than ownership is all that is being traded. Thus, the capital required and costs of speculation are far lower with respect to stock index futures than with respect to the actual shares of stock underlying the index, simply because there is no investment actually made or contemplated.

The tremendous popularity of stock index futures rests on these cost factors, coupled with the fact that we are trading in stock indices representing bundles of stock—the most popular of which has proved to be the S&P 500.

As we have noted, a broadly based index such as the S&P 500 mirrors movements of the market as a whole. Indeed, it was designed and compiled to measure these market movements. The trivial cost and tremendous leverage available (compared with those of the stock exchanges) make index futures and options an ideal instrument for speculation in short-term market movements. Speculation is in the index—the market itself—and the futures and options market reacts far more quickly to macro-economic factors than does the underlying market, precisely because it is an index product. Thus activity on futures and options markets tends to predict, and hence influence, the prices of individual stocks on the exchange that, in theory, determine its value. To quite a substantial extent, the tail is wagging the dog. For those who are expert at predicting the general direction of the market—who understand or think they understand its psychology and dynamics—it presents a relatively cheap and efficient way to profit.

The fact that stock index futures and options are a speculators' market does not exclude the potential utility to others. Other commodities markets have many of the same characteristics. Proponents of index futures and options hold that this market, like the commodity futures and options markets generally, makes hedging risks of short-term price changes for investors easier and cheaper. Undoubtedly this is true.

For example, an investor wishing to shift a portfolio to more equities can sell index futures while purchasing individual stocks and thus neutralize market shifts which may affect his purchases. And an investor wishing to shift from equities to cash may reverse the procedure. This tactic does neutralize or hedge short-term market swings.

For a long-term investor, these short-term swings would seem trivial to hedge; but why not, if available. Of course, if the market is thought to be going down significantly in the near term, the value of the timely hedge is greater, although in both cases the same result could be obtained in the stock market itself. At a small cost, the hedge buys time to seek the best price for stock investment or divestment. That is useful, but hardly as significant as advocates of the futures market urge. The investor who wishes to lighten his equity investments or add to them for fundamental market reasons would scarcely be influenced in that decision by the existence of a short-term hedge, though he might use it. His investment concern is longer, unless, of course, his "hedge" is really speculation in short-term market movements.

Another version of the same hedge benefit is the use of futures to dispose of a stock portfolio when a new manager takes over, so as to get a base line against which to measure his performance. Presumably, transferring the existing portfolio to him would taint his performance until such indefinite time as that existing influence was purged. Again it's useful, but scarcely essential to investment purposes.

Versions of the foregoing in "dynamic" implementation are called "portfolio insurance," or "dynamic hedging"—forms of program trading. This theory says that an investor can hedge long-term market risks by buying in a rising market and selling as the market declines. The mathematics are impeccable if it is possible to buy and sell at the prescribed "trigger" points. In relatively stable markets it probably is, but in relatively stable markets it is probably not very productive, since even low transaction costs affect profit. The interesting hypothesis is the rapidly falling market where attempting to shift increasingly large portions of a portfolio can contribute to depressing prices and defeating the hedging objective. The fact that this hedging simply follows market directions rather than having another origin makes it "informationless," but it tends to impact the market in whatever direction the market is moving, thus making it suspect in causing volatility.

There are two distinct but related risks to otherwise harmless—even useful—activities. First, to the extent that a market to hedge short-term market risks exists, it may serve to encourage institutional investors to remain with a higher percentage of equity longer than might, in view of market fundamentals, seem prudent. Obviously this is the case with portfolio insurance, which essentially sells its "insurance" on that basis. These same considerations may well influence other funds as well. The longer one can stay with equity in a rising market and the quicker one can get out in a falling one, the better the profit on paper performance.

Staying with equity when fundamentals would suggest otherwise has the effect of pushing up stock prices somewhat higher than they would otherwise be. Delaying a shift from equity to debt thus not only fails to add to the market timely selling over longer periods, but tends to concentrate that selling in a shorter period of time. Thus the market may drop much faster on bad more than would otherwise be the case, although it may not drop further. This appears to be what happened on October 19 and in the preceding trading days. When a large number of institutional investors decide to sell large amounts of equity, whether on the futures market or the exchanges, the "other side" may not be there, absent a very large price drop. The most valiant efforts of market makers cannot stabilize too massive a selling program. The market will fall until investors stop selling or other investors start buying.

The second risk is simply that of speculation. It seems obvious that not only are the futures markets ideal for speculation but that it is, in fact, going on. The market is, after all, not a market for investment but one for hedgers and speculators. The enormous volume of trading coupled with the relatively small, by contrast, open positions at the end of the day points unmistakably to the fact that there is more speculation than hedging going on.

One can legitimately ask what difference this makes. It is speculation by knowledgeable professionals and, even in the major market drop of October, did not result in defaulted contracts or loss to lenders.

There may, however, be less tangible but nonetheless important consequences. The stock markets, as we have noted, have been careful over the years to foster a responsible image that contrasts investment with speculation, and encourages the former as a relatively long-term activity and discourages "playing the market." The purpose has been to build public confidence and dispel any image of the exchanges as fast-buck casinos.

This remains an important objective. A serious political problem would be created if people had the impression, true or mistaken, that their savings and pension expectations were simply high stakes for professional gamblers.

That argument can be easily overstated, but it is a consideration which the SROs and the regulatory authorities should not overlook. It is also an argument that is fueled by volatility in general and, of course, the fears provoked by very large and very rapid stock market losses.

VIII. CONCLUSIONS AND RECOMMENDATIONS

Not surprisingly, our analysis of program trading leads us to make a number of recommendations. We set these out in some detail below. Many have already been discussed and urged in the body of this study. In some instances, the suggestions require no further elaboration, while in other instances their implementation would require further technical consideration and testing.

A. Changes At The New York Stock Exchange

As we have indicated, we believe the nature of the stock market has changed substantially as advances in technology and new social and economic organization have taken place. Nonetheless, its fundamental function remains unchanged, though in some danger of being overwhelmed by events and trends which for the most part are clearly beyond the capacity of the NYSE to control. Exchanges must continue to endeavor to find better ways of coping with the large and often diverse trades of institutional investors and with the apparent desire of many to invest in the "market" itself or buy or sell an instant portfolio, whether or not based on an index.

1. The computerized DOT system is one innovative way of speeding up trading and accommodating a much larger volume of trades. It also makes much more feasible "program trades" because of the ability of a broker to sell at market several stocks simultaneously. If such trades are to be made on the floor—and the desire to have all trades made openly is a proper one—this facility is important to that end. It is also essential to accommodating the desires of institutional investors to trade in a number of stocks at once, and the NYSE should continue to expand its capacity.

2. It is difficult to be certain whether there is a genuine investor desire to invest in the "market" or merely to speculate in it. The success of index futures suggests some of both. In any event, we think the NYSE should give serious consideration to trading one or two broad stock indices on the floor of the Exchange. In our contemplation, each index would resemble an open-end market fund based on a recognized index and be fully backed by shares of stock. Certificates of ownership in the index would be traded like shares of stock and would pay the dividends of the underlying shares less administrative costs. Success of such a hybrid would depend upon the offeror's ability to trade such certificates at substantially less cost per trade than for trading the basket of stocks and on the convenience of fixed denomination certificates as opposed to the basket of stocks themselves. We recognize the problem of creating, in a sense, multiple specialists in the same stock. Our conclusion is simply that if a need exists for trading an index, it should be met. As we say below, similar certificates could be traded on the futures market.

3. Denying DOT use for program trades that relate to futures either by way of hedges or arbitrage does not seem, except in the sort of emergency that occurred in October, desirable or feasible. It is a useful reminder of the extent to which trading in futures is dependent on simultaneous trading on the exchanges. But the problems of interrelationship should be dealt with by the regulatory agencies or by agreement between the exchanges approved by the regulatory authorities, and not unilaterally.

4. The NYSE should consider using the DOT system to accommodate large block sales by making the sale simultaneously available for bid by all interested broker-dealers. It seems to us conceivable that in time it might even be possible to trade on the floor portfolios qua portfolios, rather than as individual stocks. If the DOT system were programmed to identify the trade as a portfolio trade while simultaneously tracking the last sale of the stocks involved, the proposal might bring to the floor trades that presently take place upstairs. The more open trading can be, the more delay that can be avoided; and the more the specialist uses the upstairs firms as resources, the better the market will operate. We believe the specialist system is useful in promoting stability in the marketplace, and that even more advantage can be taken of computers in matching buyers and sellers.

B. Changes In Index And Option Futures

1. There are three related problems with respect to index and option futures. First, there is no identity of "product" or "commodity" between the cash markets and futures markets. No index is traded on the stock exchanges. Second, the products which make up the index are traded on the stock exchanges but not on the options and futures exchanges. The futures exchange trades only the profit or loss on the index, not the stocks that make it up. In a sense, it is trading only the grin on the Cheshire cat, not the cat itself. Third, because it is trading only the grin and does not need to concern itself with the underlying cat, it has enormous cost advantages over the stock exchanges. Equally, it is unconcerned with stable prices. Indeed, it thrives on minute-to-minute volatility, which, in turn, leads to arbitrage. New York, with its different products and different philosophy, is linked to Chicago by arbitragers; it has no choice. While this may increase commissions because of the increased volume of selling and buying, we do not believe increased trading alone invariably serves the public interest.

Whatever solution is proposed, it must, we believe, take account of these differences. This means changing the cash settlement feature and the "margin" and capital requirements of the futures market. We do not think it is in the public interest to continue to permit trading in index futures and options without changing the cash settlement feature and the "margin" requirements. Unless and until appropriate changes are made, the futures and options market will attract more speculation than hedging and will, through arbitrage, force the stock exchanges to embrace a philosophy of short-term trading heretofore antithetical to their investment philosophy and inconsistent with the stabilizing role intended for its specialist members.

As we have said, prices on the NYSE are to a very large extent led by the futures, because of the cost and time advantages they enjoy. The futures markets are highly speculative and highly leveraged—the results of which are felt on the stock exchanges. They are markets for trading only, not investment, because of the cash settlement feature, though arguably they can facilitate investment. But this claim to promoting liquidity on the exchanges is suspect. They may, for reasons discussed, have encouraged funds to maintain more investment dollars in equity, because of the hedging potential, than might otherwise have been the case, but such liquidity is too ephemeral to be encouraged. Apart from that, it is difficult to see how they have promoted investment.

In any event, to link closely two markets with such disparate standards defies common sense. It cannot but help encourage trading speculation and lead investors to forget long-term investment returns to concentrate on short-term trading profits. Given the other pressures on professional managers today to beat the market, as well as the extent to which economic theory tends to concentrate on the immediate (the "efficient market" measures the future in present prices), this trend may continue. But, surely, encouraging such a change in investment philosophy—encouraging speculation—should result from a conscious shift in public policy perceptions, not simply from the desires of speculators to speculate.

There may be a useful function to index futures and options. As we have said, it is by no means clear whether or not their attraction lies in the fact that they offer convenient ways to invest in the "market" cheaply, or whether there is a genuine interest in hedging, or whether they simply attract speculation. We firmly believe that cash settlement and the leverage which goes hand-in-hand with it should be modified. Settlement, at the option of either party, should be, as it is in all other exchanges, in kind. If such a requirement were introduced, then obviously the "margin" and capital requirements would have to be increased to take account of the substantially larger settlement obligation.

There are technical difficulties to settlement in kind, particularly if the indices are not themselves traded on the exchange. We believe it would be helpful—perhaps even necessary—that an identical product be traded on the cash market. That should help keep the market prices in closer harmony. Obviously some indices which are market weighted—Value Line, for example—would be more difficult to settle in kind than those which are price weighted, where a basket of stocks could in fact be purchased and delivered, adopting the form of a certificate of ownership in a fund.

It must be stated that settlement in kind, and all that goes with it, would substantially increase trading costs on the futures and options markets and bring them closer in concept to the stock exchanges. That is both unavoidable and intentional. It would cut down the presently enormous attraction of pure speculation—an objective that has traditionally been eschewed—and once again help to make investment the proper focus of attention.

If the stock, futures, and options markets are to be closely coupled, they should be dealing in the same products under roughly similar conditions. Perhaps this could be accomplished simply by raising the margin requirements. We think it preferable to couple that with settlement in kind. The proposal would also go a long way toward eliminating the problems of the triple witching hour, and perhaps even eliminate the present "disclose on open" solution as unnecessary.

We are not certain what all consequences of settlement in kind would be. We accept that the great bulk of contracts would be closed without such settlement and that this fact leaves very substantial room for continued speculation—perhaps too much. Perhaps, also, the problem of creating a method of settlement would prove insuperable, though we doubt it. Certainly, trading on the cash market shares in index funds would greatly increase the feasibility of trading futures and options in the fund. What we are convinced of is that the present system encourages speculation by making it so inexpensive and so leveraged.

2. Obviously such a solution must take into account the possibility that foreign exchanges will trade futures and options on a cash settlement basis and thus defeat the purpose of the change. It is our judgment that presently there is only a minor risk of such an occurrence. Foreign exchanges would have to operate at inconvenient hours; they have less credibility and more risk, particularly when dealing in an American stock index future; and a variety of potential controls, from differential tax treatment to trading prohibitions, exist. We doubt the major dealer-brokers have any interest in evading U.S. policies, since all are responsible players.

It should be pointed out that pension funds, mutual funds, banks, and other players could be prohibited from trading on foreign exchanges. We do not, of course, recommend such drastic action. What we do recommend is that serious negotiations with regulating authorities take place in an effort to achieve some common policies with respect to trading, manipulation, open information, security of transactions, and so forth. If it does not make sense to have stock index derivatives determine stock prices in the United States, then other responsible governments may share that view.

3. We have considered less drastic solutions such as position limits and price limits of the sort recently instituted. We cannot see how such limits will solve the problems we believe exist. They may represent well-intentioned efforts to reduce volatility, and perhaps can partially succeed, but do not go to the heart of the problem. Position limits are a weapon against market manipulation, and price limits an effort to control the up and down sides of the market. Neither solves comfortably the problem of the linkage of the exchanges. Indeed, price limits on futures could simply increase the pressure to trade securities on the cash markets.

4. We wish to emphasize that the changes which should be made in both margin and capital requirements are designed to reflect the settlement-in-kind option. Cash settlement does not require substantial margins or substantial capital if the only purpose is to ensure that obligations can be met. We are not critical of present arrangements designed to serve that purpose, though the differences between "speculation" and "hedging" can cause inequities and, in a major drop, cash flow problems for some. We are critical of cash settlement because it leads to excessive leverage, speculation, and an impression of more liquidity than in fact exists—not because people defaulted on obligations. While a major fall such as occurred on October 19 is bound to strain capital resources, it would appear that current arrangements were adequate—though barely—and need to be supplemented only in minor ways, if at all. Perhaps the exchanges, together with the FRB and the regulatory agencies, would be well advised to put into place a coordinated contingency plan in the event of an emergency. Such a plan would help build public confidence.

C. Changes In Regulatory Authority

1. For reasons stated in Section IV, we believe that it is important to consolidate regulatory authority over all U.S. markets trading financial instruments. The interrelationship of such markets is too intricate to divide regulatory authority and to impose different standards and procedures. It is a tribute to the cooperative spirit of the SEC and the CFTC that they have not had more problems and that regulation has gone as well as it has. But the potential for disagreement and divisiveness at some future time simply is not worth the risk when no useful purpose is thereby served. In short, the ancient axiom that a divided command is a prescription for disaster applies with particular force to the present situation.

We do not underestimate the political difficulties of consolidation. These might be eased by creating new subcommittees in the House and Senate to deal with consolidation on an interim basis.

2. While we believe it would rarely, if ever, be wise to order markets closed, the future is too uncertain not to make provision for the possible contingency. We believe the consolidated agency should have such authority, and that existence of such authority, even though never invoked, could itself engender public confidence in times of crisis. A reluctance to exercise such authority would be a sign of governmental confidence.

3. While we do not believe market manipulation is a major problem, we believe there are technical problems arising from regulatory gaps with respect to "front-running" that should be closed. The markets should more closely coordinate their effort to curtail this abuse, and the Congress should clarify existing statutory prohibitions when such conduct occurs in two markets. Obviously the existence of a single unified regulatory agency would again be most helpful in this connection.

D. Conclusion

The stock exchanges and the index futures and options exchanges come from different backgrounds and have different purposes, practices, and traditions. Stock exchanges have always catered to investors, have emphasized the long-term character of investment, and have sought stability in the marketplace. Futures and options exchanges exist to permit buyers and sellers of commodities to transfer price risk to others. Treating stock indices as "commodities," and thus allowing investors to hedge market price fluctuations, necessarily introduces new speculative elements into investment, elements not present historically in the exchanges. Presumably, the stock price, unlike the commodity price in the cash market, would already have taken the future into account.

These two markets are today inextricably linked by arbitrage programs. Arbitrage between markets in the same commodity—for example, the gold or silver exchanges—simply smooths prices in a riskless way and thus serves a useful market function for both markets. But arbitrage between stock exchanges and futures markets is performing a different function in the process of linking prices. The same "commodities" are not being traded, and the same purposes are not being served. Shares of stock are not—like wheat, pork bellies, or gold—tangible products, but they are treated as though they were by the creation of an "index"—a concept, not a commodity—assigning to it the value of the shares of stock which compose it, and in effect trading the incremental value broken down into convenient units. Because the exchanges are dealing in different "products" and trading by different rules, it is cheaper and quicker to trade in Chicago. Yet those trades can be and are enormously influential for the prices of stock in New York, because of arbitragers who link the two markets.

Since the concept being traded on futures and options exchanges derives its price from the matching bundle of stocks on the stock exchanges, arbitrage is bound to occur when the prices of the index and the basket of stocks get sufficiently out of line to make an arbitrage profitable at minimal risk. The result is that trading index futures and options in very large quantities determines the collective value of the relevant bundle of stocks and heavily influences the price of each component share.

A second link between these markets arises when the index is used as a surrogate for the market and serves as a short-term hedge, so that a portfolio can be bought or sold on the stock exchange without assuming the risk of market fluctuations. Like arbitrage, this also involves buying or selling a basket of stocks, that is, executing a program.

As we said at the outset, the problems are not caused by programs; programs can result in problems because different markets having different purposes, traditions, and rules interact with each other. This interaction must be faced, together with decisions as to which differences should be resolved. Our recommendations here seek to accomplish that end.

NOTES

[1] A complete list of references used in this study is provided in the bibliography. Wherever appropriate, sources are identified in footnotes.

[2] The market drop on October 29, 1929 was a 12.82% decline from the previous day's close. By contrast, on October 19, 1987, the market fell 22.61% from the previous day's close.

[3] On a parallel front, and of perhaps greater significance to today's environment, the Commodity Exchange Act of 1936 was the legislative blueprint for stability in the commodity futures markets, and the forerunner of the Commodity Futures Trading Commission Act of 1974.

[4] See Douglas, *Protecting The Investor*, 23 Yale Rev. (N.S.) 521 (1934).

[5] Kalich, Joyce, ed., *New York Stock Exchange Fact Book 1987* ("1987 NYSE Fact Book"), p. 70.

[6] The volume traded on Black Monday was 603 million shares, a daily volume not surpassed by any annual volume in the 1950's until 1955. *Id.* at 69.

[7] Act of June 4, 1975, p. 7, 89 Stat. 111, added Sec. 11(A)(1) to the 1934 Act.

[8] Institutions have been estimated to control a little more than one-third of the outstanding shares of stock but account for three-quarters of the trading on the exchanges.

[9] *Financial Accounting Standards Board, Rule 87.*

[10] The momentum for banking deregulation has not waned in the aftermath of Black Monday. FDIC Chairman William Seidman and Comptroller of the Currency Robert Clarke testified before Congress on October 28, 1987 that the barriers were too rigid. *See SEC Today*, Nov. 9, 1987, volume 87-213, p. 1.

[11] 1987 NYSE Fact Book, p. 77.

[12] On May 16, 1972, the CME introduced a new International Monetary Market ("IMM"), listing seven currency futures contracts—British pound, Canadian dollar, German mark, Italian lira, Japanese yen, Mexican peso, and Swiss franc. Since then, the IMM has enjoyed explosive growth as an accepted standard for facilitating worldwide trade.

[13] More than ninety-five percent of futures contracts do not result in delivery of the asset underlying the future, because most parties to futures contracts offset their positions. Offsetting one's position involves a party to a futures contract entering the market a second time to acquire the same type of contract but bearing an obligation opposite to his first transaction. The two transactions offset one another and the party is excused from both obligations. Had a market price movement occurred between the two transactions, one would not be regarded as having [illegible] one's position until the money difference had been settled. T. Byrne, *The Stock Index Futures Market*, 33 (1987); *Handbook of Financial Markets and Institutions*, 8.15 (6th Edition 1987 edited by E. Altman).

[14] GNMA is an acronym for the Government National Mortgage Association—a federal government corporation within the Department of Housing and Urban Development which serves as a guarantor of mortgages issued by lenders and backed by FHA or VA loans. The instruments on which GNMA futures are based are mortgage-backed certificates issued by private mortgage lenders and guaranteed by the GNMA, which are made into a security and traded as a security. GNMA futures allow lending institutions to hedge against interest rate risk.

[15] *See generally*, Markham & Gilberg, *Stock and Commodity Options—Two Regulatory Approaches and Their Conflicts*, 47 Albany L. Rev. 741, 759-68 (1983).

[16] The seller of a call can suffer unlimited losses if the market moves against him, because the price of the underlying asset can increase, in theory, *ad infinitum*. The maximum loss the seller of a put can suffer is the value of the asset underlying the option less his original premium received, since the value of the asset cannot fall below zero.

[17] There are also a number of complex trading strategies using options that fall outside the scope of this study. *See e.g.* L. Sacher, "Option Strategies for 1987," *Financial World*, March 24, 1987.

[18] Other stock derivative instruments currently traded are options on individual stocks and options on stock index futures. However, since stock options are not directly involved in program trading and options on index futures are not widely used, this study will concentrate on stock index futures and stock index options.

[19] One of the rare times that index futures and options may be used to hedge against upside price movements is when a brokerage firm, as a special service to a client, sells to the client a portion of its own portfolio of, say, S&P 500 stock, with the intent of then buying back these stocks in the marketplace. To avoid a loss, the brokerage firm would buy a S&P 500 future as hedge against a market rise between the time it sold and purchased the stock.

[20] This judgment is reflected in the legislation authorizing the introduction of stock index futures, which mandates cash settlement. *See* 7 U.S.C. §2a.

[21] Technically, the use of stock options does not involve the purchase or sale of securities at the time of entering into the option, but upon exercise of the option an investor could purchase or sell securities.

[22] Byrne, "Program Trading—A Trader's Perspective," *Commodities Law Letter* Vol. VI No. 9 and 10, p. 9 (1986).

[23] Since the stock market crash on October 19, 1987, exchanges trading index products have increased their margins. For example, prior to October 19 the initial margin for the S&P 500 contract was $5,000. By October 29 the margin had been raised to $20,000. CFTC, *Interim Report on Stock Index Futures and Cash Market Activity During October 1987 to the U.S. Commodity Futures Trading Commission* 48-49 (Nov. 9, 1987) ("CFTC Interim Report").

[24] Virtually all users of stock index futures and options hedge only against downside risk—they want to take full advantage of any upward movement in the stock market. Thus, unlike commodity futures where two hedging parties could take opposite sides of a futures contract, the fact that stock index futures and options users generally hedge only against downside market movement implies that only speculators take the other side of an index future or option contract. Portfolio insurers may also do so because they sacrifice some upside profit to lessen downside risk, i.e., they sell in a down market and buy in an up market.

[25] Futures Industry Association, *Volume of Futures Trading 1960 through 1986*.

[26] For 1987, up to October 26, 1987, trading in the S&P 500 index future contract amounted to $2,5[illegible].9 billion compared to $1,540.7 billion on the NYSE. Moreover, trading in the S&P 500, Major Index, NYSE Composite Index and Value Line Index Futures contracts during the same time frame amounted to $3,086.5 billion compared with $1,621.9 billion of trading in the NYSE, Amex and NASDAQ. Belkin, *Equity Options and Futures Commentary* 6 (Oct. 26, 1987) (Salomon Brothers Inc.)

[27] The CBT currently has three foreign stock index contracts pending before the CFTC: the Financial Times Stock Exchange 100 Index, the Japanese Stock Index and the Canadian Market Portfolio Index. The CME has the Nikkei 225 index contract pending before the CFTC. The CME currently also has pending before the CFTC the Morgan Stanley Capital International EAFE stock index, which tracks 2000 stocks in Europe, Asia and the Far East.

[28] This metaphor is suggested by the observation in Joel A. Blocke's article "Portfolio Insurance: When, Not What," *The Wall Street Journal* 24 (December 11, 1987), likening portfolio insurance to automobile insurance sought when the car first skids out of control.

[29] This simple example ignores the natural premium included in the price of index futures as well as transaction costs and impact costs ("execution slippage").

[30] Because index futures are cash settled, their theoretical value will usually be greater than that of the underlying basket of stock. This premium will erode over the life of the index futures until its expiration date at which time the index future will equal the value of the underlying basket of stock. This premium can best be explained by an example. An investor interested in equities exposure has two choices. He could either invest in a three months index futures contract or invest in the underlying basket of stock. If an investor invested in the underlying basket of stock, his account balance in three months (the life of a futures contract) would be equal to the value of the stock at that time plus any dividends he received during those three months. Alternatively, the investor could invest in a three month index futures contract. Since index futures contracts require only a small good faith bond (roughly 5 to 10 percent of the value of the contract), the investor could invest the money in Treasury bills and place the necessary amount as a good faith bond with the futures exchange. Using this investment alternative, the investor account balance in three months would be equal to the value of the index and the yield offered on the Treasury bills. Because the index futures contract equals the underlying basket of stock when it expires, the yields on two alternative investments should equal another. Thus, by simple algebra, the index futures price should be equal to the value of the index at any given time less dividends received and/or expected to be received plus the yield being offered on Treasury bills (this yield will vary depending upon the length of time until the index future's expiration—the longer the time the higher the yield). *See* Luskin D. *Index Options and Futures—The Complete Guide* 202-205 (1987).

[31] *Id.* at 202-205.

[32] Block trading has sometimes been referred to as "program trading," another source of confusing nomenclature.

[33] *New York Stock Exchange Fact Book for 1987*, p. 12.

[34] This analysis is derived from data provided by the NYSE for January 2, 1987 through October 19, 1987 and was conducted by Professor Sanford Grossman, John L. Weinberg Professor of Economics at Princeton University, whom we retained to conduct certain statistical analyses for this study. In calculating program trading as a percentage of daily share volume on the NYSE, Professor Grossman has used a fraction in which the numerator is the sum of program buys and sells and the denominator is twice the NYSE volume, since NYSE volume itself is the number of shares that have changed hands.

[35] Subcommittee on Oversight and Investigations by the Economics Division of the Congressional Research Service *Program Trading: Public Policy Aspects of Index Arbitrage* 10 (June 1987).

[36] Individuals can participate profitably in upward movements of stock market with protection against market losses—similar in concept to portfolio insurance—through hedged index mutual funds and certificates of deposit with rates of return tied to performance of the S&P 500. *See* B. Donnelley, "Portfolio Insurance for Individuals Increasingly Viewed as a Bad Deal," *Wall Street Journal*, Nov. 25, 1987, S.2, P.1.

[37] The firms are Bear Stearns, BT Brokerage, Cowen & Co., Donaldson Lufkin, Drexel Burnham, First Boston, Fossett Corp., Gold Securities, Goldman Sachs, Gruntal, Interstate, Kidder Peabody, Mabon Nugent, Manko, Merrill Lynch, Nomura Securities, Oppenheimer, Pershing, Revcon Associates, Rosenblatt, Salomon Brothers, Shearson Lehman Brothers, Spear Leeds, Susquehanna, Wagner Stott.

[38] E.F. Hutton, Paine Webber, Prudential Bache, Smith Barney.

[39] Paine Webber.

[40] *See* Intermarket, *1986 Portfolio Insurance Directory*, Sept. 1986, p. 29; A. Wallace, "A Suspect in Market's Plunge," *The New York Times*, Dec. 1, 1987, D1.

[41] Derivative instruments and cash prices tend to move roughly in parallel fashion since they both react to the same supply and demand factors. Even though there are no empirical studies on point as suggested in Section VII of this Study, the speed with which these derivative instruments trade, based on market psychology and macro-economic news rather than the fundamental value of the particular stocks comprising an index, appears to have resulted in the stock market trading on the heels of futures markets, a proposition generally accepted by the market participants we interviewed.

[42] *See* Stoll, H., *The Stock Exchange Specialist System: An Economic Analysis*, Salomon Brothers Center for the Study of Financial Institutions, Monographs of Finance and Economics 1985-2, p. 9; *Case Study on Regulation of Specialists on the New York and American Stock Exchanges* hearing before the subcommittee on securities of the Senate Committee on Banking, Housing and Urban Affairs 92d Cong. 2d pt. 6 at 4 1-216 (1972). The specialist must decide on the basis of experience how much to adjust the quote on a stock to bring the market into balance and at the same time make a profit by performing this function by buying at bid prices and later selling at asked prices, which are generally greater than bid prices.

[43] Amid rumors that many specialists folded their hands on Black Monday—after all they trade for their own account and an attempt to maintain orderly markets can translate into personal financial calamity—there have been calls for stiffening specialists' capitalization requirements or perhaps having a number of specialists competing as market makers. But no one trading in a rapidly declining market could reasonably expect a specialist to make it "orderly," for that concept does not put a floor on prices.

[44] J. Calle, Jr., "Specialists & 'Open Outcry' = Incompatibility," *Wall Street Journal*, Nov. 12, 1987, p. 38. For example, on October 19 the S&P 500 future traded at prices well below, sometimes 40 points or more below, the cash value of the underlying stock.

[45] *New York Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921).

[46] The need to negotiate complex "boundary agreements" is itself proof of the wisdom of unifying regulatory control.

[47] *See* 7 U.S.C. §7a(12); 17 C.F.R. §§1.41 and 1.61.

[48] CFTC Interim Report at 47. For example, the CME adopted a 30 point price limit above or below the previous day's settlement price in the S&P 500 contract.

[49] *See* CFTC Advance Notice of Proposed Rulemaking, 45 Fed. Reg. 55469, August 20, 1980.

[50] 7 U.S.C. §6a(1); 17 C.F.R. §§1.61 and 15.03. Beyond "the limit levels themselves, exchange rules provide for the aggregation of accounts and enforcement mechanisms such as large trader reporting." CFTC Interim Report at 43.

[51] 15 U.S.C. §78g.

[52] *See* Regulations T (broker lenders), U (bank lenders), G (other lenders) and Reg X (borrowers) at 12 C.F.R. §§220.1 *et seq.*, 221.1 *et seq.*, 207.1 *et seq.*, and 224.1 *et seq.*, respectively.

[53] The FRB, in its most recent study on the subject, expressly repudiated the rationale for margin as a means to prevent the "diversion" of credit, arguing that the money borrowed goes to purchase securities from an investor who then reinvests those funds, with no net drop in the amount invested. FRB, *A Review and Evaluation of Federal Margin Regulation*, 9-11 (December 1984).

[54] 7 U.S.C. §7a(12)

[55] Although the Federal Reserve sets the margin ratio at 50 percent, brokers generally require a higher margin ratio.

[56] Short selling is a device allowing a person, usually a speculator, to sell stock he does not own in the anticipation that the price will decline and that he will thereby be able to make delivery of stock borrowed and sold, by purchasing it at a lower price. *See* Rule 10a-1a, 17 C.F.R. §240.10a-1(a).

[57] 17 C.F.R. §§1.17 and 240.15c3-1.

[58] *See* 17 C.F.R. §§1.12(i) and 240.17a-11.

[59] Rule 17a-5; 17 C.F.R. §§1.18 and 240.17a-5.

[60] *See* 17 C.F.R. §§1.10, 1.20-1.30, 1.32, 1.36, 240.15c3-3(b), 240.15c3-3(e).

[61] *See* 15 U.S.C. §78eee(a)(1); 17 C.F.R. §§1.16 and 240.17a-3.

[62] Section 12(k) of the 1934 Act provides the SEC with the authority to close the markets with approval from the President. Section 8a(9) of the Commodity Exchange Act allows the CFTC to declare an emergency when there is a "major market disturbance which prevents the market from accurately reflecting the forces of supply and demand." One of the actions that the CFTC can take is to suspend trading.

[63] McMurray, S. and Rose, R., *The Wall Street Journal*, October 20, 1987 p. 22 col. 4.

[64] J.M. Keynes, *General Theory of Employment, Interest and Money*, 155 (Harbrige Edition, 1964).

[65] *See, e.g.*, Crudele, "Wall Street's Memorable Minute," *New York Times*, December 20, 1986, p. 35; Frank & Lederman, How Chicago Zaps Wall Street, *Business Week*, September 29, 1986, at 92; Greenhouse, "How Chicago Affects the Dow," *New York Times*, September 18, 1986, at D1; Crudele, "Volatility Tied to Wide Use of Computers to Set Trading Patterns," *New York Times*, September 13, 1986.

[66] Zurack, *Has the Stock Market Become More Volatile Since the Introduction of Stock Index Futures Contracts?* (Goldman Sachs Research, November 1985); Birinyi and Hanson, *Market Volatility: Perception and Reality* and *Market Volatility: An Updated Study* (Salomon Brothers Inc. 1985 and 1986 respectively); Stoll and Whaley, *Expiration Day Effects of Index Options and Futures* (March 15, 1986); Stoll, *Expiration Day Effects of Index Options and Futures: Summary and Conclusions of Empirical Analysis and an Examination of Proposed Changes in Expiration Procedures* (March 15, 1986); *New Worries about Stock Price Volatility*, Morgan Economic Quarterly (December 1986); Ricker, *Expiration Day Stock Price Behavior—Manipulation or Trading Opportunity* (Mellon Capital Management Corporation, no date); Edwards, *Stock Index Futures and Stock Market Volatility: Evidence and Implication* (Columbia Futures Center, Columbia Graduate School of Business 1986); Securities and Exchange Commission, Division of Market Regulation, *The Role of Index-Related Trading in the Market Decline on September 11 and 12, 1986* (March 1987); Stoll, *Index Futures, Program Trading and Market Procedures* (May 1987); Edwards, *Financial Futures and Cash Market Volatility* (Columbia Futures Center, Columbia Graduate School of Business, 1987); and Board of Governors of the Federal Reserve System, *Stock Market Volatility* (August 1987).

[67] These conclusions represent the product of original research conducted by Professor Sanford J. Grossman.

[68] Thus, concern over manipulative practices in the 1920's made possible by the existence of options trading created considerable Congressional pressure for the abolition of options trading during the investigations of the 1930's. *See* CFTC, SEC, FRB, *Study of the Effects on the Economy of Trading in Futures Options*. III—25 (Dec. 1984) ("1984 Options Study").

[69] One perceived check against manipulation in the legislation authorizing futures trading on indexes was the requirement that the underlying index represent "the market for all or a substantial segment of" publicly traded securities and that the authorized futures contract not be "readily susceptible to manipulation." 7 U.S.C. §2a(ii).

[70] An earlier investigation into possible intermarket manipulation involving trading in the S&P 100 index option contract on the CBOE in April 1984 resulted in a conclusion that no such intended manipulation had occurred, though this inquiry "illustrates the possibility that strategies may be used to attempt to influence the value of a stock index to profit in a stock index derivative product." 1984 Options Study I-25, VIII-8 to VIII-10.

[71] As *NYSE Information Memo No. 85-26* states:

> . . . when a member or person associated with a member organization is in possession of material non-public market information concerning a block-size transaction in a component stock of an index, the execution of which affects the value of the index, trading in options on that index before information concerning the block transaction has been made publicly available to take advantage of the non-public information may violate just and equitable principles of trade, Exchange Rule 476.

The various options exchanges have similar rules.

[72] In promulgating Rule 476 and interpretations under that rule the NYSE acts in accordance with Section 6(b)(5) of the 1934 Act, 15 U.S.C. §78f(b)(5), directing securities exchanges to promulgate rules promoting "just and equitable" principles of trade. Moreover, the SEC has power to enforce these rules under Section 21 of the 1934 Act, 15 U.S.C. §78u.

[73] To be sure, the CEA, while not prohibiting dual trading, does forbid a firm from executing proprietary trades while holding a customer's order on the same contract. *See* 17 C.F.R. §155.3(a)(1)(1986). Similarly, the CFTC condemned "trading on inside information concerning customers transactions by floor brokers" in the agency's 1984 report to Congress on insider trading in futures markets. *See A Study of the Nature, Extent and Effects of Futures Trading By Persons Possessing Material Nonpublic Information* at 80 (Sept. 1984) ("CFTC Insider Trading Study"). This, however, does not address the question of intermarket trading.

[74] Moreover, in the securities area alone, when a brokerage firm trades on the basis of undisclosed information about the market impact from the brokerage firm's other transactions, whether customer or proprietary, such conduct would not appear to invite sanctions under the antifraud provisions of the Securities Acts, even though the conduct might violate NYSE Rule 476. Indeed, industry understanding has been that these provisions do not apply while the SEC in the current debate over the proper ambit of prohibitions against insider trading does not appear, at least explicitly, to have taken a position contrary to this understanding. At the same time front running in the securities area must naturally be distinguished from situations in which a brokerage firm employee "misappropriates" such information of the firm and uses it for his own benefit, as *Carpenter v. United States*, 56 U.S., L.W. 4007 (Nov. 16, 1987) implicitly teaches. Yet as discussed above, there is great doubt as to whether a brokerage employee who steals such information and uses it to trade on a futures exchange, for example, has done anything illegal under the securities or commodities law, whatever the reach of the mail or wire fraud statutes in light of *Carpenter*.

[75] In the 1982 reauthorization hearings for the CFTC, some members of Congress did express concern about the opportunity for insider trading in the stock index area. CFTC Insider Trading Study, Appendix I-B at 1. The CFTC report, however, recommended no change in existing legislation in this area. CFTC Insider Trading Study at 10.

[76] While information about a single company would hardly seem of great "inside" importance, advance knowledge of the corporate buy back program following Black Monday, for example, would seem to be the kind of inside information useful for trading on the index futures market.

[77] B. Malkiel, *A Random Walk Through Wall Street* (1973).

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NYSE'S SuperDOT System - A Brief Description

The NYSE's SuperDOT (DOT stands for Designated Order Turnaround) is a network of electronic order processing and post trade systems. SuperDOT provides a communications link between member firms trading operations and the New York Stock Exchange floor. SuperDOT is a set of systems which have been developed to deliver member firms orders to, and reports from, the NYSE Floor; and to provide input to the clearance and settlement process. This set of systems performs several related functions, including:

- routing of orders, reports and administrative messages
- post trade processing
- database creation and maintenance

SuperDOT also has a number of special features which facilitate the processing of orders. Among them are 1) OARS (Opening Automated Report Service) which stores pre-opening market orders and continuously summarizes buy and sell orders -- presenting the imbalance to the Specialist up to the opening of each stock. Using this information in conjunction with his knowledge of the standing limit orders and interests represented on the NYSE trading floor and in the Intermarket Trading System, the Specialist is able to determine the opening price for each stock within moments and 2) booth routing, which allows member firms to electronically send orders to either their booths on the NYSE Floor or the appropriate specialist post for execution.

When the system was inaugurated in 1976, it was capable of handling only 100 share market orders. In response to needs of users and the market as a whole, the system has been expanded to include a variety of order types, size ranges and routing instructions. Approximately 80% of all orders submitted to the NYSE are entered through the SuperDOT system.

The SuperDOT system is composed of five different types of systems, each of which performs different functions. They are as follows:

Systems	Functions
CMS (Common Message Switch)	- Receives, edits and validates orders from member firms, then routes them to host systems. - Receives report of executions from host systems, routes back to appropriate member firms. - Receives and sends administrative messages.
Host Systems Market (market orders) LMT (limit orders/odd-lot* orders)	- Receives and creates database of either market or limit orders. - Prices and reports market and limit odd-lot orders. - Routes either market or limit round-lot orders to floor switching system. - Receives reports of either market or limit executions from floor switching system. - Creates/updates databases.
Floor Switching System (UFDC)	- Receives orders from host systems. - Switches orders to appropriate specialist post or member firm booth location, depending on member firm instructions.
Display Book	- Receives orders on CRT screens, sends reports (based on execution of orders represented by the specialist in the auction market) back to floor switching system.
Post Trade Systems	- Creates automatic matches for all executed trades. - Sends resulting information to NSCC.

Member firms have several ways to communicate with SuperDOT. Their orders can be sent directly from their computers to CMS, entered via SuperDOT terminals or routed to CMS by a service bureau (such as ADP or BTSI). All orders are sent through dedicated data lines.

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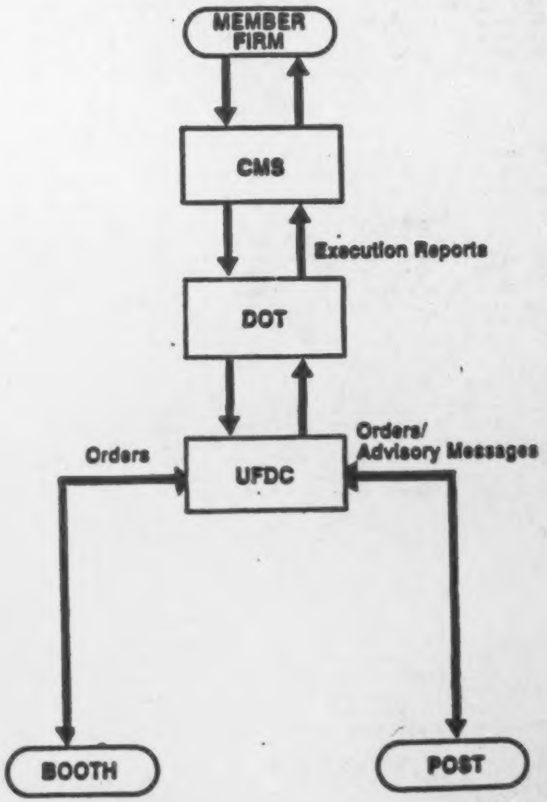
* Odd-lots (1-99 shares).

How is A Typical Order Processed? (See Diagram Attached)

How would a market order for 100 shares of AT&T be handled in SuperDOT?

1. Member firm market order is generated at either a branch office (retail orders) or trading desk (institutional orders).
2. Member firm (a CMS Subscriber) enters an order over dedicated data line from their computer, terminal or service bureau.
3. CMS receives order, edits and validates it. CMS routes it to the Market system.
4. A market order is received by the market system, where it becomes part of the market order file; the order is switched by the floor switching system to the appropriate specialist post.
5. After the order has been represented by the specialist in the auction market and executed, the report is routed back (in reverse) through the same systems.
6. Execution reports are also sent simultaneously to the post trade system. Each trade is automatically matched with an omnibus name, then sent to the clearance and settlement system.
7. This entire process usually takes less than 60 seconds.

SYSTEMS INTERFACE



THE NEW YORK STOCK EXCHANGE, INC.

SPECIALIST JOB DESCRIPTION

I. OBJECTIVE

An Exchange member registered as a specialist is accountable to the Exchange for the quality of the Exchange markets in the securities in which the specialist is registered. The specialist is responsible for fostering and acting to maintain liquid and continuous two-sided agency auction markets by acting as agent and principal in those securities on the Exchange Floor. The specialist helps ensure that such markets are fair, orderly, operationally efficient and competitive with all other markets in those securities. A "fair" market is free from manipulative and deceptive practices and affords no undue advantage to any participant. An "orderly" market is characterized by regular, reliable operation, with price continuity and depth, in which price movements are accompanied by appropriate volume, and unreasonable price variations between sales are avoided.

As is true of all Exchange members, the specialist is expected to adhere to all applicable Federal laws and regulations, and Exchange rules and policies. In this way, the specialist actively contributes to maintaining high quality Exchange markets in the public interest. Because of the specialist's central position in the Exchange's continuous two-way agency auction market, the manner in which and the degree to which the specialist performs significantly affects the efficiency, competitiveness and overall quality of Exchange markets, and largely determines the Exchange's success as a national securities market. Therefore, specialists are expected to enhance their performance in the ways set forth in the Specialist Job Description.

The specialist occupies a position of public trust and should act at all times in a manner consistent with that trust. Therefore, it is essential that the specialist adhere to the highest standards of business and ethical conduct in the performance of all aspects of the specialist's job. This duty is formalized by the Exchange's Rule 401 which states that members must "at all times adhere to the principles of good business practice." Failure to do so can be detrimental to the Exchange and constitutes a breach of public trust.

The Specialist Job Description is intended to guide specialists in the performance of their duties. Certain specific areas are enumerated below, and may be modified by the Exchange as circumstances require. This is not to be construed as a complete list of specialist duties and, in circumstances not specifically addressed below, the specialist should be guided by the spirit and intent of the Job Description.

Acts or omissions by the specialist that appear to be inconsistent with the Specialist Job Description are addressed by the Market Performance Committee and via the regulatory process under various Exchange rules. Exchange Rule 103A provides standards with respect to performance of these duties. It is under that rule that the Market Performance Committee monitors the specialist's fulfillment of the expectations set forth in the Specialist Job Description, and takes steps to encourage performance improvement.

II. PRIMARY DUTIES

A. AGENCY FUNCTION

In view of the specialist's central position in the Exchange's continuous two-way agency auction market, a specialist should:

Act as agent on behalf of orders entrusted to the specialist, hold the interests of such orders above the specialist's own, and properly represent each order, regardless of its size or source, in the marketplace to ensure the timely and best possible execution in accordance with the terms of the order and the rules and policies of the Exchange.

B. DEALER FUNCTION

In performing as principal a specialist should:

1. Affirmative Obligation

Buy and sell securities as principal when such transactions are necessary to minimize an actual or reasonably anticipated short-term imbalance between supply and demand in the auction market and do not upset the natural longer term forces of supply and demand, and effect such transactions when their absence could result in an unreasonable lack of continuity and/or depth.

2. Continuous Market

a. Make firm and continuous two-sided quotations that are timely and accurately reflect market conditions, and ensure that principal transactions are calculated to contribute to the maintenance of price continuity with reasonable depth, and that such transactions are effected relative to the general market, the market in the particular security and the adequacy of the specialist's total position in the security with respect to the actual or reasonably anticipated needs of the market.

b. Ensure that the election of a Stop Orders results from the fair and orderly price movement of the stock and not from poor performance or inadequate depth.

3. Negative Obligation

a. Provide an opportunity for public orders to be executed against each other without undue dealer intervention within the context of the current market, and not deal in a manner that is inconsistent with the overall objective of maintaining a fair and orderly market, as defined above.

b. Given a reasonable time frame and lack of substantive change in market conditions, refrain from interfering with a cross when the specialist has previously indicated "no interest".

c. Refrain from interfering with a "clean" agency cross unless the specialist's bid or offer has been previously solicited; or unless the reasonably anticipated needs of the market require the specialist to do so in order to be able to fulfill the market maintenance responsibilities of the specialist and a Floor Official has been consulted in the event of any disagreement.

4. Financial Resources

Effect principal transactions in a manner that is consistent with the specialist's financial resources and that maximizes the efficient use of those resources, and report promptly to the Exchange any actual or imminent financial problems that may affect the specialist's ability to fulfill the responsibilities of the specialist to the market.

C. MAINTAINING THE AUCTION MARKET

In opening and reopening trading in a listed security, a specialist should:

1. Market Openings and Reopenings

a. Initiate trading in each security as soon as market conditions allow, at a price that reflects a thorough, professional assessment of market conditions at the time and appropriate consideration of the balance of supply and demand as reflected by orders represented in the auction market, taking extra care, however, when the opening or reopening price is significantly different from the preceding closing price, and maintain continuous fair and orderly trading in the aftermarket.

b. Seek the advice of floor officials in a timely manner in requesting delays in openings or trading halts when warranted by unusual market conditions.

2. Market Coordinator

Serve as the market coordinator for the securities in which the specialist is registered by exercising leadership and managing trading crowd activity, and promptly identifying unusual market conditions that may affect orderly trading in those securities, seeking the advice and assistance of floor officials when appropriate.

3. Market Catalyst

Act as a catalyst in the markets for the securities in which the specialist is registered, making all reasonable efforts to bring buyers and sellers together to facilitate the public pricing of orders, without acting as principal unless reasonably necessary.

D. COMMUNICATION FUNCTION

In view of the specialist's central position in the Exchange's continuous two-way agency auction market, a specialist should:

1. Equally and impartially provide accurate and timely market information to all inquiring members in a professional and courteous manner.

2. Indicate the depth of the current market, to the extent the specialist's agency responsibility allows, in response to any reasonable inquiry from a member.

3. Equally and impartially provide all inquiring members with accurate, complete and current opening price indications and pre-opening information, such as the amount of stock paired off and the excess to buy or sell.

E. ADMINISTRATIVE FUNCTION

A specialist's administrative and operating practices can have a significant impact on the quality and competitiveness of the market. Therefore, a specialist should:

1. Employ efficient administrative procedures that enable the specialist to maintain accurate and up-to-date records, process trade documents efficiently and accurately, and respond promptly to requests for order or market information.

2. Promptly provide information when necessary to research the status of an order or a questioned trade, and cooperate with other members in resolving and adjusting errors.

3. Accurately report executions of orders entrusted to the specialist in a timely and complete manner and provide information, when requested, on the status of orders and the confirmation of open orders.

4. Maintain a level of trained staff on the Exchange Floor at all times sufficient to meet periods of reasonable demand, and provide the supervision necessary to ensure the efficiency and professionalism of the specialist's operation.

5. Ensure that, during an absence from the post, the replacement on the floor is aware of all pertinent information related to the securities in which the specialist specializes.

6. Make arrangements for supplementary staff and financial resources that may be necessary to meet extraordinary market conditions.

7. Utilize Exchange systems and procedures.

F. COMPETITIVE RESPONSIBILITIES

Recognizing the intensely competitive environment in which the specialist operates, the specialist should:

1. Make every effort to be fully competitive in all segments of the market and to maintain and increase market share in the securities in which the specialist acts as the specialist.

2. Establish a positive professional relationship with Exchange listed companies and each year extend an invitation to meet with representatives of the listed companies in which the specialist specializes to acquaint them with the workings and operational aspects of the agency auction market system.

3. Each year extend an invitation to meet with appropriate on and off-floor representatives of those member firms with which the specialist conducts a significant business and such other member firms as are deemed appropriate to discuss the service, operational and competitive requirements of the member firms.

G. OTHER MARKET RESPONSIBILITIES

In addition to these duties, the specialist is expected to:

1. Assist the Exchange in developing and implementing systems and procedures designed to enhance the efficiency and competitiveness of the Exchange's agency auction market, and to satisfy Federal requirements.

2. Comply with all measures and standards of performance established by the Exchange, understanding that failure to meet these standards could subject the specialist to prescribed performance improvement procedures, which may include the reallocation of a security or securities.

3. Keep records required by Federal and Exchange rules, promptly and accurately report required information to the Exchange, and comply with all Exchange rules which govern the financing of specialist operations.

4. In addition to the above, take any actions not prohibited by Federal or Exchange rule or policy or precluded by professional judgment to foster and maintain liquid continuous two-sided agency auction markets on the Exchange Floor and to ensure that such markets are fair, orderly and efficient in the public interest and competitive with non-Exchange markets in Exchange listed securities; and avoid any action which would hinder the achievement of these objectives.

III. ELIGIBILITY REQUIREMENTS

An Exchange member who desires to be registered as an Exchange specialist must:

1. Be associated with an existing or newly created specialist unit approved by the Exchange.

2. Complete an adequate training period under the supervision of an experienced specialist.

3. Pass the Exchange-administered specialist examination.

4. Ensure that the specialist unit with which the specialist is to be associated meets the Exchange's specialist capital requirements.

5. Participate in an orientation session with a panel of market professionals, whose membership will be drawn from the Market Performance Committee, to discuss the responsibilities and duties of being an Exchange specialist.

September 3, 1987

DESCRIPTION OF NYSE'S INTERMARKET SURVEILLANCE GROUP (ISG)

Since the formation of the Intermarket Surveillance Group (ISG or the Group) in February of 1981, it has, through the cooperative efforts of the participating self-regulatory organizations (SROs), worked toward the goal of a fully coordinated intermarket surveillance program. The ISG continues to believe that this program represents the most efficient and cost effective means of achieving intermarket surveillance and is consistent with the Congressional intent to maintain the basic scheme of self-regulation established by the Securities Exchange Act of 1934.

In September of last year, the ISG submitted its sixth month status report to the Securities and Exchange COmmission (SEC) addressing many significant accomplishments and reaffirming the Group's continuing commitment to improving the intermarket surveillance program. Over the past nine months, the ISG has continued to progress in the many and varied tasks set forth in the September, 1983 Project Plan. This report, therefore, provides the status of each of the tasks contained in the Project Plan as well as a discussion of other noteworthy developments affecting intermarket surveillance.

Over the past three and one-half years, the ISG has completed or made substantial progress toward completing major tasks considered to be essential elements of an intermarket surveillance program. Briefly, these include:

- Defining the intermarket violative conditions which each SRO must consider in designing individual surveillance programs and procedures for intermarket trading.
- Establishing a central automation system for the collection and processing of intermarket surveillance information utilizing quotation, transaction and clearance information made available by each SRO - the Central Collection and Reporting System (CCRS).
- Distributing intermarket trading information to all participating SRO's for use in individual intermarket surveillance programs.
- Designing SRO intermarket surveillance procedures to detect the defined intermarket violative conditions utilizing intermarket trading information available from the CCRS.

- Establishing procedures for the coordination of intermarket surveillance investigations so as to create an efficient and timely method for the investigation of potential intermarket trading violations under the concept of a coordinating SRO.
- Allocating equity and options surveillance responsibilities for the detection of intermarket violative conditions, occurring across more than one market place - ISG/SRO Agreement.
- Initiating changes to the CCRS system to allow for the integration of SRO audit trail data into an ISG audit trail.
- Initiating automation enhancements within the various SRO's to close potential gaps in the intermarket surveillance program and improve overall surveillance capabilities for monitoring intermarket trading.

Although on-going work continues in certain of the above noted areas, it is important to note that the substantial progress in all these areas was and will continue to be made possible through the cooperation of all ISG participants who are committed to minimizing the potential for intermarket trading abuses through effective surveillance programs and procedures.

The **Chairman**. Well, thank you very much, Chairman Phelan. That was a remarkable presentation. I expected it to be much longer. It was the shortest presentation we've had and certainly one of the very, very best.

You said in part of your remarks that you felt that the exchange could process a 600 million share day with no real problems.

Let me skip down the various problems that we've encountered in the course of our hearings this week and ask you about each one.

Does that mean that they could keep trade open in all stocks, they would open on time and stay open throughout the duration in all likelihood?

DELAYS

Mr. **Phelan**. Well, I'm talking about automated systems problems, but I will talk about delays. Our procedure at the exchange which has worked extremely well over a period of time is that when we have significant imbalances we hold up the opening, in order to display throughout communications systems what those imbalances are, so that the price is at least a reflection of true supply and demand in the market at that time.

I think we would still proceed in that manner. We don't like to hold up trading for a long time, but on the other hand, we hate to open the stock precipitously. You will notice that in both of our actions where we reallocated stock it was not only done on price fluctuation but because of a precipitous opening at a price within 30 to 35 minutes without a change in the asset values of those companies.

The **Chairman**. You would execute all orders?

Mr. **Phelan**. Yes, I think we would execute all orders. Execution was not so much a problem on that day as was the returning of the reports. Since then we've made major improvements. One, we've opened a new blue room which has given us 20 percent more trading capacity and has also allowed us to diversify our systems and therefore diversify the order flow.

Second, we have transferred a significant number of the old odd lot system to the new system and we think that today, given the volume we had on those days, we would not have any problems in that area.

Third, we had some problems in the as-of status report at the end of the day. We've made some software changes and added some files so that with a volume of 600 million shares that shouldn't be a problem anymore.

Fourth, we had some traffic delays because of printer problems. We have 30 more printers on the floor today than we had before. But more importantly, we had 215 electronic books on the floor. Today we have 285. All of the orders coming in there bypass the printers as well. So we think we have solved that problem as far as limit orders are concerned and as far as offered orders are concerned. I think we've made considerable progress in fixing the problems we had on that day.

The **Chairman**. We have had reliable documented reports that tens of thousands of phone calls were not answered. Is that under control?

Mr. **Phelan**. Well, that's not a direct exchange problem because orders don't come into us by phone call. It is a problem with the member firm community. If an RR has 100 accounts and all of those 100 accounts want to reach him at the same time, there are going to be problems.

I think that both the firms and, as I understand it, the mutual fund industry as well are taking steps to improve their communications but I just can't tell you whether that's being solved. However I think if you ask that question 6 months or 1 year from now it will be a heck of a lot better than it was on October 19, but I think that if you're going to get a significant part of the customer base trying to reach the people who are managing their money all at once you're going to have significant problems.

DIFFERENCE IN MARGIN REQUIREMENTS

The **Chairman**. Mr. Phelan, one of the sharpest differences between the New York Stock Exchange and the Chicago Mercantile Exchange is margin requirements. You operate under margin requirements imposed by the Federal Reserve Board. The Chicago Mercantile Exchange's margin requirements are determined by the CFTC. The Fed requires investors who buy stocks in your exchange to meet a 50-percent margin unless they're professionals and then they have a margin of 25 percent.

The futures market in Chicago, on the other hand, requires margins that are 10 percent, sometimes even less. As of now it's been raised to 15 percent.

Now yesterday, we went after Mr. Melamed on this and he gave a very spirited response. He said, as a matter of fact, that their margin requirements are safer than yours. He was very emphatic about that. He said the reason is that all investors have to make a settlement at the end of each day. If, for instance, at the end of the day they've lost their investment—they've put in 10 percent, the stock has dropped 10 percent—they've got to come up at the end of that day with 10 percent, and then the next day if it goes down 10 percent they've got to come up with another 10 percent.

It seemed like a very forceful position. He wasn't successfully challenged by the committee on it. And you're the pro on it. Is this the case? He said that they're safer because they have to come up at the end of the day and the investors in the New York Stock Exchange do not. They can go 4 or 5 days. Therefore, as a matter of fact, from the standpoint of safety, Chicago's margin requirements are every bit as strong, maybe stronger, than yours.

Mr. **Phelan**. Well, I think the spirited response comes from—margin is a very complicated subject and I think the spirited response comes from a misunderstanding of what people on the equity side of the market say about margins.

They think that we are talking about their floor dealers. As a matter of fact, in dealing with whatever capital requirements they have for their floor dealers, they have an extremely efficient system. A good bit of their regulation is spent on surveilling the economic or the financial viability of their floor traders. The reason for that is, if a trader fails, it imperils the settlement system which comes at the end of the day; and No. 2, they are all members of the clearing corporation or clear through people who are members of the clearing corporation and those people have to make up the net difference if it is lost by one person in the system.

So they have an extremely efficient system for watching almost on a half-hour and hourly basis the financial viability of those traders and, indeed, do in fact walk on the floor sometimes and pull the badges off the traders and not allow them to trade anymore.

I think that's an entirely different thing than the people we are talking about with margins. The issue is really basically how much margin does a customer of the system have to pay when he comes into that system and puts up some money. The other day we had a meeting of our regional firms, of which there are about 100, and our specialty firms of which there are about 200, who think that for the purposes of margins, all equity-related securities should be treated like an equity margin.

The stock exchange has never said that margin ought to be "x" or "y". I think that when this committee was kind enough to have me down in November, the only thing that I said then is that it ought to be under one authority. That doesn't mean that you can't delegate to each market some of the authority to allocate what that margin should be.

So I think, No. 1, you have to separate out the dealer system and the dealer system is different in each marketplace and has its own protections. Dealers need a liquid system in which they can in fact raise money to trade. I think the question comes on the customer's side and I really believe that if you're going to have coordination between exchanges, exchanges shouldn't get into each others internal affairs. In other words, I really don't think that I should tell the Chicago Merc how to run the Chicago Merc.

When we did the intermarket trading system in equities back in the late 1970's and early 1980's, the reason we could get a competitor to link into a system and to agree on a certain basic set of rules that each would adopt is we stopped trying to tell each other how to run each other's exchange. No exchange has to be a mirror image of the other. You just agree on certain basic, common rules and apply them throughout the system.

We thought it was better to do that on an exchange basis than having some regulatory authority do that for us and we've been successful. One of the reasons we are successful is we don't tell the Pacific coast how to run their market and they don't tell us how to run our market.

I think what we're saying, as far as dealers on the Chicago Exchanges are concerned is that they ought to be able to determine what their margins are and how to protect their system. Somebody independent of both kinds of markets should at least do a study of the margin requirements for equities, for options, and for futures and see how they are related as far as the customer is concerned, and then make some suggestions. That's really all we're saying.

And I have no idea at this time whether they're too high, too low, or in-between.

The CHAIRMAN. Thank you, sir.

Senator **Heinz**. Mr. Chairman, thank you.

Mr. Phelan, I want to commend you for the proposal that the New York Stock Exchange made yesterday to ask the SEC to make your voluntary rule permanent. I want to make sure I understand it.

SUSPENSION OF THE DOT SYSTEM

That rule would apply only to the suspension of the DOT system for the execution of program trading for proprietary purposes or would it be more broad than that?

Mr. **Phelan**. If in fact the Dow fluctuated more than 50 points from its close, either up or down, what we would do is to take that part of program trading which is index arbitrage off the electronic system both for customers and for proprietary accounts.

Senator **Heinz**. So that a large pension fund that had its own computer could not access the regular transfer system?

Mr. **Phelan**. After 50 points.

Senator **Heinz**. After a 50 point trade?

Mr. **Phelan**. Right.

Senator **Heinz**. How would you know?

Mr. **Phelan**. Well, they're usually marked and I think that we have to pass another rule that says you must put a numonic on the order that actually specifies where it's arbitrage or whether it's portfolio insurance or whether it's a basket.

The main thing that this rule—well, let me back up for 1 minute. It is perceived by a number of people, including the public, that index arbitrage—that which they equate being generic program trading—really is responsible for the volatility, particularly after January 8 when the market was off 140 points in 1 day and where a good bit of that decline was accounted for by index arbitrage. There was the perception that index arbitrage was causing the volatility in the marketplace.

We tried to address that problem because customers, institutions, and everybody in the system was beginning to get very agitated about it, so we thought we would put a collar, if you will, on that kind of thing by putting a 75 point fluctuation on it. It was felt that taking it off the system in some way retards it. Now we picked 75 points because when we looked at the 50 point figure in 1987, we found that you would have had to shut the system down to those kinds of orders about 72 times, and if we did 75 points I think it was only 5 times, and if we did 100 points it was only a couple of times.

Senator **Heinz**. So I understand, you said at 50 points it would hit about 72 times.

Mr. **Phelan**. Well, it would have in 1987. We are not sure that the fact that it is there doesn't have an inhibiting influence on volatility itself.

Senator **Heinz**. My theory on that is when you set a limit people reprogram their programs to halt before things get out to those limits.

Mr. **Phelan**. Right. And second, we don't want to set it too low so that you prohibit the product from functioning as we think it should in the marketplace. I think going to Senator Bond's comment, I certainly don't believe that you can go back. You've got to go forward in this world. You're not going to do away with technology. You're not going to do away with efficient communications. We need to have the market adjust better to it and we need to do it in an evolutionary rather than a revolutionary way, and that's really what we're trying to do.

Senator HEINZ. Let me ask you about one or two specifics. You mentioned—and I'm glad you did because I was going to bring it up—January 8, which is an interesting date for two reasons. First, it is the morning of which the Nick Brady report was issued. Second, it is the day in which the overall change from open to close of the market was about 141 points. It may have been as much as 180 at one point. And as I understand it, it was not only a question of program trading, but it was largely driven by proprietary firms index arbitrage. It wasn't done by customers. It was done by, if you will, the insiders. Is that correct?

Mr. PHELAN. Basically, there was an enormous amount of professional arbitrage.

Senator HEINZ. Why isn't that in a pejorative sense insider trading?

Mr. PHELAN. Well, that's a very difficult question because I think the reason for that being felt is that in general everybody knows where the price of individual securities are in our market. In general, people know what the price of the index future is trading at and, in general, if you want to use technology, you can figure out the spread between the two and when that spread equals more than the money market fund. In general, if you had the equipment to do it, you could buy one and sell the other——

Senator HEINZ. What you're saying is that it became a very profitable insiders' game.

Mr. PHELAN. Well, it's a professionals game.

Senator HEINZ. Professionals' game.

Mr. PHELAN. I would probably use the word professional rather than insider.

Senator HEINZ. Your sense of tact has not abandoned you even in these circumstances.

Was that a major factor in the Exchange's recommendations yesterday?

Mr. PHELAN. Yes. I think that that day really—while there were discussions about the 19th and 20th, I think two things—one is the Brady report—said that in fact it is one market and I think the rest of the world, whether they accept that fact or not said, "My God, if it's one market, are we going to continue to have these kinds of fluctuations?" I think when January 8 came, it was kind of the straw that broke the camel's back. I was watching the—not to give a commercial, but the Today Show——

Senator HEINZ. Let me just ask you one question because my time is up. How much effect did the Advest decision ad and the Shearson E.F. Hutton Super Bowl ads—I saw two or three of them with my friend, Senator Wirth, as Denver was going down the tube—we wish Denver better luck next time as long as they don't play the Pittsburgh Steelers, which is highly unlikely until we get a quarterback. [Laughter.]

We would be happy to accept yours any day.

The **Chairman**. Your time is up.

Senator **Heinz**. Well, maybe Green Bay can get in there somehow.

Senator **Bond**. Mr. Chairman, if Senator Heinz doesn't like the Pittsburgh Steelers, we'll take them in St. Louis. [Laughter.]

Senator **Heinz**. My time is going to expire, I can tell.

How much of an effect did those decisions and ads have on the members of the New York Stock Exchange being so enlightened yesterday?

Mr. **Phelan**. I think that what's happened is that those ads reflect an enormous amount of customer pressure, both retail and institutional, on those firms in the area of program trading—and I'm sure those customers could give you 100 definitions of what it is. But they believe program trading is causing volatility in the markets and they want to know why those firms are participating in that volatility. So those ads led to that and I think that led to an agreement.

Senator **Heinz**. One last question. I understand that you generally feel that the Brady report is on target. Is that right?

Mr. **Phelan**. Yes, sir.

Senator **Heinz**. If you have taken action on your own making proposals to the SEC, which I assume they will act on, obviously the New York Stock Exchange feels that fast action to maintain belief in our markets, the credibility of our markets, do you feel it is equally important for Congress to do its part and let us say enact all or most of the Brady reforms as quickly as possible?

Mr. **Phelan**. Yes. I think that they certainly have viewed the universe in the correct way and I think that the recommendations make a lot of sense.

Senator **Heinz**. And if we stall and we procrastinate, if we don't do anything or if we appear to be dragging our feet, what's the consequence of that?

Mr. **Phelan**. Well, markets are very difficult things. I think that you cannot say the consequence in the future was that you're not going to have another stock decline; and too, that it may not have the same kind of velocity that it had before.

The problem with the stock decline was not so much the New York or Chicago markets or something like that; it really is that major institutions behaved in a manner that was not predicted in the marketplace before and are attempting by communications and other means to move billions of dollars worth of equities almost instantaneously and demand instantaneous execution and liquidity.

As long as that expectation is there and as long as the lesson hasn't been learned from the 19th, a lot of what else can be put in the system still won't prevent that from happening again. But I certainly think the other things that the Brady report talked about and the SEC report talked about, over a long period of time, are the systemic things that are needed in the system to really address the matters of liquidity and the other things that we've talked about.

Senator **Heinz**. Mr. Chairman, I thank you. Thank you, Chairman Phelan.

The **Chairman**. Before I call on Senator Wirth, I'd just like to announce that Senator Riegle has called to give his apologies. He wanted to be here very much, but he had to attend the funeral of former Governor Mennon Williams of Michigan.

Senator Wirth.

Senator **Wirth**. Thank you very much, Mr. Chairman, and, Mr. Phelan, thank you for being here, and I want to thank Senator Heinz for his kind comments earlier as well.

I want to pick up on Senator Heinz' other comments related to what I gather is his feeling of sort of a sense of urgency or a sense that we in the Congress have a responsibility to heed the many reports that have come in and not just to read them and have hearings on them, but to try to figure out a strategy for dealing with what seems to be an inexorable fact, and that has been said by everybody, that these markets, while they may have some different purposes, are intertwined and may be, as you point out, very rapidly becoming a single market.

And yet as the markets are doing this, we have a regulatory structure which in large part assumes that these are totally separate markets, that what goes on in Chicago is completely separate from what goes on in New York, and that what goes on in the CFTC is totally separate from what goes on at the SEC.

It just seems to me to be a most ridiculous situation of a regulatory structure that is denying the reality of merging markets.

The political problem we face is reflected in the testimony and in the attacks of one group upon another about what we ought to do, reminding me of 6 or 7 years ago when we had the first skirmish in the discussions over the Shad-Johnson accord—you remember that—in which the chairman of the Commerce Committee, John Dingell, and I had a very difficult time even getting agreement that the SEC ought to be able to have a voice in advising the CFTC on what they were doing. We had a problem then and it seems to be exacerbated now.

So we have a lot of veto power sitting out there, everybody saying, "Don't meddle in my regulatory structure," and the question is, what do we do about that?

We could sit back, as the Congress does in a situation like this too often, and allow all of that veto power to assure that nothing happens, or we can try to design some other kind of a process for moving into this and increasing the discussion and perhaps getting a broader consensus on the fact that there should be some more coordinated regulatory system.

It seems to me that maybe what we ought to be thinking about is a kind of phased approach to this. Maybe we ought to look at a kind of phase one in which we ask maybe the Fed and the SEC to come in and look at where the regulatory gaps and overlaps are, that we ought to design some kind of a process of getting all of these disparate groups together to look at this.

Have you thought about this at all, Mr. Phelan, how do we get beyond the veto power political problem we have to arrive at what everybody seems to think is a necessary rationalization, or what Gerry Corrigan has called, broader harmonization of these markets? How do we do that?

Mr. **Phelan**. Well, I think that, first of all, every time you mention the subject it obviously evokes a great deal of reaction, as you've said.

We are regulated in the Exchange by both those oversight and regulatory groups, the SEC for the equities and options and the CFTC for futures. Each has a different purpose. Each has a different definition because of the nature of the markets. The CFTC deals with mostly a professional kind of market and has different rules and regulations to deal with that market. The SEC really is involved with customer protection and the fairness and openness of the markets and everybody who participates in them.

I think that what we called for in this paper, which I think others have called for as well, as a first step is to form a joint committee between the SEC and the CFTC and the participants to sit down and work this out.

The third regulator, is the Fed, which in normal times you don't really have to have too much to do with but during times of emergency you'd better stay close to. I'm sensitive to Chairman Greenspan's statement that they are concerned that if you save the deepest pockets in the world back there that everybody will do irresponsible things knowing that they will be bailed out in some way. The Fed in this country takes a different approach to markets than, say, the Bank of England. The Bank of England not only is involved in everything that goes on in the markets but was the driving force in the reorganization and the evolution of both the government bond markets and the equity markets in that country.

But I do think and I agree that it would seem to me to be impossible to say you ought to have one regulator. It's just not——

Senator WIRTH. It's just not politically realistic.

Mr. PHELAN. You're just not going to get that. So then you've got to get on with the next thing because we have continuing problems, and I think that the problems are the same with the exchanges as with the participants in the exchanges, such as the listed companies, the member firms, some of whom are enormous users of the futures markets and others who are not users at all and hate the product, as well as with the regulatory groups. You need to get them to sit down at the table to begin a dialog.

I think that's how you evolve into something more permanent over a period of time.

My major concern in the long term is that self-regulation works 85 to 90 percent of the time. The reason that you have SEC and CFTC is that when you really get down to tough economic decisions, the things that really affect the pocketbooks of broad constituent groups, you do need that oversight authority or the authority of the big club that's able to make a final decision. And that's why you do have SEC's in this country and that's why you do have CFTC's and that's why you have committees like this.

So I would think the first step is to get the SEC and the CFTC—which I'm sure they are more than willing to do—to sit down, to get the participants together and begin to talk and to evolve into something that 5 years out while we don't know what it would look like is certainly better than the process that we're using today.

Senator WIRTH. Well, I've pretty much come to that conclusion myself, and I don't think right now we're going to solve this problem legislatively in 1988 and we're not going to end up with a designed solution to this, and what we ought to be looking at is a process and it seems to me that we could probably force that process pretty quickly in the Congress and just tell them to do that and get back to us and that we could do that pretty rapidly, maybe even as part of this whole financial restructuring legislation that we're looking at. One might help to drive the other.

Thank you again, Mr. Phelan. I appreciate your being here.

The CHAIRMAN. Senator D'Amato.

Senator D'AMATO. Mr. Chairman, I want to associate myself with at least the conclusion of my colleague, Senator Wirth, because it seems to me we get up—and I don't know whether it's the glare of the cameras or the microphone and what not, we all go off on these toots about legislation, and then the witnesses, too—I have to say to you, John, notwithstanding my complimentary remarks—I thought they were rather complimentary, but your performance, when I hear you say we agree and there's got to be congressional action, which is basically what a lot of people—at least my colleagues have been saying—that the Brady report calls for, I don't really see it that way. I think there has to be, as Senator Wirth has indicated, the move by the self-regulators, by the market, and if necessary, the pressure has to come from the Securities and Exchange Commission and from the CFTC to bring about the kind of coordination that the people are talking about.

SPECIFIC RECOMMENDATIONS

For the life of me, I'd say, what specific congressional action should be taken? Would you recommend any?

Mr. PHELAN. I don't think we're in disagreement, Senator. I think that, for instance, I can think of no congressional action that would have prevented the week of the 19th. The universe had changed. The environment had changed. The users' use of the marketplace had changed. And no law or regulation would have changed that.

The only thing that I think we have to address, which is really what I think the Brady report addresses, is that at some point in time if you can't get one regulator, you need coordinated regulation. And if it can't be done on an evolutionary basis by the self-regulatory organizations and the regulators themselves, then Congress may have to come back and address it.

Senator D'AMATO. So if 30 or 60 days from now, if you see that there is not the kind of activity and motion and coordination that you think there should be, you might be prepared to recommend specifically that Congress order, as Senator Wirth has indicated, the regulators to undertake a specific line of communications or to bring about the kind of coordinated activity that's necessary?

Mr. PHELAN. I think they will and I think they are already doing it. I think there's great willingness on the part of the SEC and the CFTC to do it.

Senator D'AMATO. I just have to indicate to you—I'm not afraid of legislative initiatives, but I am concerned when I haven't seen anything specific and I hear my colleagues saying, "Yes, we need congressional action." I think we're the worst ones to come in at this point, given the intricacies of this marketplace, the volatility that one could stir up, by some kind of legislative action that might read well but not do well by the marketplace.

Let me ask you one other question. The Brady report called for the Federal Reserve to act as the super regulator, so to speak. Would you support that?

Mr. **Phelan**. Well, after Chairman Greenspan said he didn't, I have a hard time doing that, I suppose.

Senator D'**Amato**. That's a good way out. Thank Greenspan for that.

Mr. **Phelan**. I think, Senator, the answer to that is that in normal periods of time you really need the Federal Reserve involved when you have a liquidity crisis such as we had on the 19th. I think the thoughtful way to do it is that because they are the ultimate allocator of credit, you plug them into the system so that you don't have a situation where everybody says don't worry about it, they'll bail us out, yet at the same time——

Senator D'**Amato**. That's something that should be more formalized, a method and procedure put forth.

Mr. **Phelan**. Yes.

GAO CRITICISMS

Senator D'**Amato**. Let me ask you one other thing. Do you think that the criticisms in the GAO preliminary report about the exchange's systems performance during October 19 and 20 were fair? If not, why not?

Mr. **Phelan**. I think the only thing I would have changed in that report was that on the whole, 85 to 90 percent of the time, the systems were operating as they should. The 10 to 15 percent of the time they were talking about are what they reported in there. Those are the things that we have shared with them and showed them where we had the problems, where we had the system delays, and those in a more general way I shared with this committee back in November.

So certainly we were not perfect on the 19th, but we did get most of the orders through the system most of the time. The system did have its faults, but we have been able in a short period of time to bring on improvements so that today we think that if we had the 19th tomorrow we would have very few problems within the system.

Senator D'**Amato**. John, everyone supports and talks about—every report—greater coordination among the affected parties, both the Federal regulators and the SRO's. Everyone talks about this. What have you and the exchange done to coordinate regulatory initiatives with the derivative product exchanges since the October market break?

Mr. **Phelan**. Two things. One, we've tried to analyze what we had to do after the 19th to get our own house in order and we are working on that and I think we've tried to detail that in our testimony.

In recent times, Mr. Melamed and I have had several conversations, one for probably 2 or 3 hours, about what, if anything, on the circuit breaker side we might do to coordinate. We are continuing those discussions. One of the things is that the futures market probably needs and can tolerate a little bit more volatility than our markets can and so perhaps the types of things we might agree on or agree to coordinate would not be identical. If in fact we used 50 points on the Dow, they might use 100 or 125. Something like that.

Second, I think it is important that whatever we do, we at least let the other markets know that we are going to do it ahead of time so they know what the rules are and vice-versa. Then when it takes place they will have time to figure out the impact on both markets.

Third, I think a great deal of progress can be made in the sharing of information among the participants in the markets as to the potential risks in the market and the growth of different products, and I think that's an easier thing to do.

Fourth, from a regulatory point of view, which is really noncompetitive and where we've been very successful with the equities exchanges, we should bring the Futures Exchange's into the ISG group in some form or other—the intermarket regulatory group. We should begin to share regulatory information and to perhaps build models that show not only who's doing what in the equities markets but in the futures markets as well.

So there are a number of things underway and I think those will accelerate.

Senator D'Amato. Mr. Chairman, I want to commend you for calling these hearings and having the perspicacity to see them through and for the excellence of our witnesses and particularly John Phelan, whom I'm pleased to commend again, John, for the activities that he's undertaken already and implemented and those that he continues to pursue.

Mr. Phelan. Thank you.

The Chairman. Thank you, Senator D'Amato.

Senator Bond.

Senator Bond. Thank you, Mr. Chairman.

Mr. Phelan, I was particularly interested in that last answer of yours because I think that goes a long way to answering the questions that we on this committee have. I would only add as a footnote to Senator D'Amato's comments, the one area we couldn't expect the exchanges to take any action on is that we have to decide who is to be first among equals in coordinating regulatory policy, as our chairman mentioned yesterday. I think that that is something that we have to look at.

But going back to your regulatory efforts, sir, I know that you did in your prepared statement indicate that there were certain instances where you did take action against specialists and reasons for it, but you did say the specialist system performed better than any other system across the country or around the world.

I was just looking back in the Brady report on page 49 where he said:

> Fully 30 percent of specialists in a sample of 50 large capitalization stocks were net sellers of those stocks on October 19. Further, 10 percent of the specialists in that sample finished the day with net short positions in those stocks.
>
> And on page 50 he indicates that from the final hours of trading on October 19 through October 20, a substantial number of New York Stock Exchange specialists appeared not to have been a significant force in counterbalancing market trends.

I wonder if you would discuss with us some of the steps that you are taking for the future with respect to the specialist system.

Mr. **Phelan**. Well, I do two things. One, I certainly still stand by that. The reason I think that the specialists did better than other dealers is that they have an assigned responsibility. We can argue about how well they carried out that assigned responsibility, but I think the assigned responsibility did have them do better than other markets certainly the over-the-counter markets and so forth.

Second, my only bone of contention with the Brady report is in the staff report and I have the greatest respect in the world for Dr. Glauber—indeed, I send some of my people to Harvard to be educated by him. One of the things that he teaches our people is to define accurately what each function is, what each participant's responsibility in that function is, and you take your measurements against that. And indeed, in the best traditions of the Harvard Business School, we have defined what the specialist function is. We have it written down. We have a job description. That job description has been agreed to by the board of the Stock Exchange and by the Securities and Exchange Commission. We also have empirical measures of how that function is carried out.

My only bone of contention is that Glauber dismissed those criteria and would like to apply another standard that is not in the system. I would have no problem if they had said that, given the job description and given the approved methods of measuring, the specialists did act—and I think they did a reasonable job under those measurements and I think the Securities and Exchange Commission came to the same conclusions.

However, they might suggest that in the future we look at whether you can be a net seller in a down market. There is a basic fundamental to dealers all over the world that if you inhibit them from reliquifying, you may wake up and not have any dealer system at all. You need that system there when the deluge has ended in order to continue the market during the next few days.

Second, there is no prohibition against short selling in any market by any dealer provided they don't reach across the market and continually drive the stock down, which is why we have TIK tests. We don't allow any liquidation on a minus TIK, which means they can't reach across the market and drive the stock down, and we don't allow short selling except on zero or plus TIK, so again they can't reach across the market and sell it down.

So I think that the kinds of measurements and dealer responsibility is an appropriate thing to talk about in the future and, indeed, we will be sitting down with the Commission and talking about that because they talk about some of those things as well.

But to say they did not do an adequate job on that day because of those measurements, I would remind those people again who train our people, that you have to define what the responsibility is and you have to measure against that definition.

Also, I do not think, considering 600 million shares and the amount of volume that the specialists did, that they hardly affected the trend at all.

Senator **Bond**. There's been discussion and a recent article in the Wall Street Journal talking about building up a reserve or an insurance fund for specialists. They talked about various ways—excuse me. My time is up. I'm going to set a precedent and stop. If you care to comment on that, I'd be glad to hear it.

Mr. **Phelan**. Yes, we are looking into that, and the insurance industry I think has something like that. Probably lines of credit are better than that and, the ones who—the better ones will probably come in last when there is no money and the first to go will be the more weakly capitalized. So we think we ought to look at that, but first we need to strengthen each unit's capability to take positions in extreme periods of time and, second, to expand the lines of credit, and then probably third, we ought to look to some other kind of pool of money to do that.

Senator **Bond**. Thank you.

The **Chairman**. Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman.

First, I'd like to join in the commendations for Chairman Phelan for what he did during this difficult time.

Mr. Chairman, I'd like to ask you a couple of questions if I might. Referring to page 17, I'm not clear where you stand on this one regulator business. You indicate that until we have one regulator in place you recommend that they form this joint committee and work together and then until we arrive at one regulator such joint committee would be an effective interim step.

I gathered in your answer to Senator D'Amato that you really aren't sure that we ever need to get to that further step. In other words, the effective interim step of the joint committee might solve the problem. Is that your position?

Mr. **Phelan**. Well, if I could play God and you say you can have——

Senator **Chafee**. Go ahead. Everybody else does around here.

Mr. **Phelan**. And you could have any one thing, at the end when the hard questions come, I'd like one single authority who could say yea or nay. However, I'm realistic enough to say, listen, you can't hold up all these other things waiting for that to happen, so I think all these other things have got to get underway right away.

Senator **Chafee**. You mean these other tries of the interim steps, as far as the unified clearing systems——

Mr. **Phelan**. Absolutely.

CLEARING CORPORATIONS

Senator **Chafee**. Now on the clearing systems, the Brady report spent a lot of time on that. You think that can be worked out by some unified system of cooperation?

Mr. **Phelan**. We don't have a clearing corporation, so I can be perfectly objective about all this.

Clearing corporations, both in options and futures and in equities, are run differently. I think that the important thing is that they begin sharing what the risk exposure is in the market under certain conditions and perhaps play "what if" about extreme conditions—what can happen and what they would do about it.

We had, for instance, on the equity side, a long debate about whether we could go to a certificateless kind of a deposit or a clearing corporation. There's a lot of people that do a lot of work in a clearing corporations. There are banks. There are securities firms. There are futures firms. There are options firms and so forth. There's a lot of financial interest involved in all those clearing corporations. It will not be an easy process if in fact you want to merge them all together, but I think it would be a much easier process to share information and share risk factors and coming to some disaster scenario. I think you ought to start with the easier ones and then go down that continuum over a period of time.

The sharing of risk information I think can be done and I think will be done by those parties.

Senator **CHAFEE**. Well, in his testimony, Senator Brady spent quite a bit of time on that.

Mr. **PHELAN**. Right. Because if the clearing corporation blows, you've got significant exposure to the entire system and to the banking system as well. So that's why they spend so much time on it.

Senator **CHAFEE**. One of the things that worries us—at least worries me—and I must say I have a general tilt toward the Brady Commission recommendations, but one of the things that worries me and others here is, is our competitive position vis-a-vis the foreign markets going to be affected if we have further regulation, increased margin requirements, and so forth? What do you think about that?

Mr. **PHELAN**. I think that margin requirements really are to add some prudence to the system. It seems to me that, for instance, there's a theorum of fire insurance, that if you make the insurance premium on $1 million worth of fire insurance too low you'll sit there and watch the whole town burn around you, and I think that that's the same thing with margin. Margin is to allow a reasonable amount of participants, not to have the entire expense of operating within the system, much the same way as consumer credit operates. But at the same time, if you allow too much of it, you create too much volatility and, you create a tendency and a temptation to overspeculate in that market. What you're really trying to do is arrive at a balance.

And I would certainly not say that derivative products should have the same margin requirements as equities. I don't think that's true.

Senator **CHAFEE**. No, he wasn't suggesting that. As you looked at the Brady Commission report, do you see items in there that would, in your judgment, harm our competitive position, the U.S. markets?

Mr. **PHELAN**. Do I see it?

Senator **CHAFEE**. Yes.

Mr. **PHELAN**. No. After all, let's take a look at it. They talked about some way to regulate the intermarket system and that's not going to do it. I think that regulation would be at a minimum, as it is in the ITS system, for instance.

Second, they talked about some balanced form of credit allocation, and I think done prudently that wouldn't be harmful.

Third, the strengthening of the clearing corporation is certainly going to aid, not harm, that in some way.

Circuit breakers, which is really the first and the fourth put into one, providing they're not onerous and providing they don't take place every day and providing they don't——

Senator **CHAFEE**. Well, you suggested a form of circuit breaker yourself, haven't you?

Mr. **Phelan**. Right. And I think each market has got to have some and there are probably one or two that have to do with across market relations as well. And certainly the fifth, which is information gathering would not be harmful. I think none of them would harm our competitive position.

Senator **Chafee**. He had the margin requirement in there, though.

Mr. **Phelan**. The margin requirement is not harmful, provided it is handled sensibly. I mean, if you make the market so onerous that in fact you do away with options and futures, then you are going to harm it.

Senator **Chafee**. OK, fine. Thank you very much.

The **Chairman**. Senator Graham.

Senator **Graham**. Thank you, Mr. Chairman.

ECONOMIC SOVEREIGNTY

Mr. Phelan, one of the issues I have been interested in during these hearings has been the extent of economic sovereignty which remains with the United States in the context of the internationalization of so many of our economic decisions.

In the area of securities markets, what do you think would be the perimeters of regulation domestically before we started to get over the line into activities that would significantly and adversely affect our international competitiveness?

Mr. **Phelan**. I don't think that we've discussed anything this morning that in fact would affect our international competitiveness. I think that if in fact you tried to eliminate or severely deter a product, whether it be equities, options or futures in this country—certainly in equities—you could easily drive a good bit of the institutional trading right to London. If you did options and futures, there's no reason why you couldn't step across the border into Toronto and build a very large futures exchange or options exchange. Therefore, if you wanted to inhibit that, you would have to put something on your institutional and pension funds that prohibited them from going offshore to do that. I certainly don't think that you would want to do that because you want to allow as many investment opportunities as you can.

So I think anything that would restrict the development of innovation, whether it be technology, communications or product development, and the use of that innovation in the market when you have a whole user group who find it useful, runs the risk of pushing it offshore.

On the other hand, if you allow no coordination and if you allow absolutely no regulation at all, then you are going to face some of the problems down the road that we faced historically, which is why we put some of the regulations in.

I'm a big believer that you need certain minimum structural regulation, however, over a period of time you get a lot of regulatory underbrush that grows up and you've got to clear that out every once in a while. In the last 5 to 7 years, we've cleared some of that out, but you've got to be careful that you don't clear out the structural underbrush. I think that's what we're focusing on.

During the week of the 19th, we had a whole other set of things coming into play that we probably didn't realize was in the system, in that institutions would begin to act differently than they have in the past. They have significant amounts of money invested and began to demand or at least tried to demand almost instant liquidity for billions of dollars worth of transactions. Those transactions came into the market swiftly, not in the traditional manner, but in the manner that in fact we've helped to build over the past few years through electronic systems and that the whole shift of liquidity and the whole shift of risk allocation and a whole shift in how we handle those institutional demands suddenly were focused upon in that week of the 19th.

And, yes, I think after that—I think the Wall Street Journal had an editorial yesterday, which says that a lot of lessons were probably learned in risk-taking. There was a great deal of forgetting that there were risks in the market. People thought that you could hedge everything, and that really you were in a no-risk world. And clearly everybody has now come back to reality.

But still we have not focused on the shifting needs of major institutions, of what their responsibility is to the marketplace, and also how the marketplace is going to adapt to handle some of that new risk and the shift of risk from one market to another.

So I think those are the things we need to concentrate on and I don't think those will in one way or another affect our competitiveness overseas.

INTERNATIONAL COMPETITIVENESS

Senator **Graham**. One of the specific recommendations of the Brady Commission which has raised the specter of adversely affecting our international competitiveness has been the circuit breaker or other approaches which would set some limit on the swings in the market on a daily basis.

If you've already commented on this, I apologize for my late arrival. If not, I'd be interested in your comments as to whether that tactic would have the effect, in your judgment, of driving business to London or other offshore locations?

Mr. **Phelan**. Well, if the circuit breaker is so onerous and in effect creates illiquidity in one or more products or creates abnormal functions for one or more products, then, yes, you have to worry about that.

We had a very interesting meeting Wednesday. We brought in 25 of our major firms. Most of the business was represented at that table. Both the very large firms which are obviously operating in these intermarkets that we talk about, plus our big retail firms, and regional and specialty firms that deal basically with retail, and some institutions as well.

There's a great diversity of opinion about these markets. If you took a vote today, the vast majority of our member firms would say they don't like these kinds of products. The firms that do a lot of program trading are torn apart internally because of their retail and institutional business and their trading business on the other side.

What we said to them was that what we wanted to discuss was how we can get a handle on some of the volatility in the market because of the public perception and their own people's perception as well. They have to understand one thing, that this is a new world, and we think the markets are going to change and that they should change, if possible, on an evolutionary rather than a revolutionary basis. What we are trying to do is to control the pace of change. The change is here to stay. We are not going to do away with equities or options or futures and that to try to do so is futile, you are not going to do away with technology and communications and what you have to do is to learn how to use them in a better way and perhaps sometimes you have to put a little governor on; the same way you don't allow all automobiles to go at 155 miles an hour.

We had almost unanimously at that meeting—they asked us to take all program trading off our systems, period. We said that, as an exchange, we had a great deal of difficulty with that because we have never separated one class of users from another. We've built a highway for all users. Originally it was manually and now it's electronically. And, in fact, you should only put the governor on when in some way for some period of time it seems to be endangering the system.

What we are trying to arrive at is a balance between the capital-raising functions of our markets, the asset management functions of our markets, and the speculation that's needed to service the other two. But we must make sure that speculation doesn't overwhelm the market and drive everything else away.

So what we're trying to do is arrive at that balance. It's an imperfect procedure. They don't talk about the baskets that come over the top from the pension funds, for instance, who just keep pumping—I think in the average basket it's $25 million—almost by second, $25 million, $25 million, $25 million, $25 million. We haven't figured out how to slow down that access onto the highway so the liquidity is there to handle it and you haven't overpowered the market.

I think we're trying to experiment. It is a new world. We are trying to deal with that new world. And we're trying to do it in a way—and we share your concern—that doesn't drive those markets offshore because after all we have a vested interest in not doing that. Our State, New York State, is a great financial center and has a vested interest in not doing that. And our country has a great vested interest also.

So it's in all of our interests to keep the business here and encourage new business to come in. So what we're trying to do in a very inexact way is to try to feel our way along not to let everything tear because we're going to lose a lot of the traditional participants that are in our market—there's all kind of talk about shifting back into bonds by institutions and other things—to keep those traditional participants there, bring in the new technology and new products, and allow them to be integrated. If you're an individual or you're an institution and you find a variety of ways to hedge your risks or take new risks or make value judgments on the marketplace, you can do that and you won't be shut out by everybody else. We want everybody to live in one united marketplace.

I think we're certainly not perfect at doing it, but that's what we're trying to do. We are not trying to shut down or eliminate any one segment of the marketplace.

Senator **Graham**. Thank you, Mr. Chairman.

The **Chairman**. Chairman Phelan, I want to follow up on what Senator Wirth and Senator D'Amato were pushing for and I want to see if I can get a clear and definitive answer here.

You indicated that if you were God you would perhaps favor a single regulator who would have the authority to act, but you think that is unrealistic. Of course, that action is a decision for us to make as Members of Congress and to use our judgment on it.

In his appearance before this committee 2 days ago, Chairman Ruder of the Securities and Exchange Commission, made the following statement. He said:

> The Commission believes that attempted coordination of regulation with respect to equity-related products may produce irreconcilable disagreements and that measures to resolve disagreements between the Commission and the CFTC must be created by new legislation.

And he felt that Congress had to reconcile the fact that those differences would come up.

I'm not clear on what your position is on that recommendation by the SEC.

PREFER SINGLE REGULATOR

Mr. **Phelan**. What I'm saying is that in my management training you have to have one voice that finally in all disputes says yea or nay. We don't have that in the system right now.

If I had one silver bullet, that's the one I would use. Having done that, you can get everybody to work together. Individual exchanges and markets just can't depend on the regulators to do all of their job for them. They've got to do most of the job themselves because they're the participants, they're the closest to the market, they understand what's going on.

But every once in a while there comes an issue so difficult, so hard, that you need a third party to say, "This is the way it's going to be."

The **Chairman**. It just seems so clear and logical that I can't for the life of me understand why members of the committee and Members of the Congress won't go along with that. Years ago the Congress created the SEC. It's been a tremendous success. It's greatly strengthened our markets. It's provided great integrity and security. Now they say they need this additional power. After all, we're dealing with equity markets here. It's true the CFTC has the jurisdiction. We know that grew up more or less by accident. For us to act to give the SEC that integrated power over equities makes sense. I don't see why it should be hard.

And having listened to the opinions of Chairman Dingell in the House and Chairman Markey, both of whom are going to have a great deal of influence in this area, it seems to me that it's not unrealistic to expect that we could get that kind of action.

Mr. **Phelan**. I just want to make sure that my comment is not interpreted as an anti-CFTC comment. I mean, we have them as a regulator in one of our businesses and they do a perfectly fine job. So I'm not talking about that.

I'm talking about final authority to make the decision.

The CHAIRMAN. Then he goes on to specify where those disagreements may occur—regulatory authority directly related to products with respect to critical intermarket decisions such as coordinated trading halts, and antimanipulative and frontrunning rules, and other matters.

Do you have any trouble with that, giving the SEC authority in that respect?

Mr. PHELAN. I'm used to that type of regulation, so for me it's not foreign.

The CHAIRMAN. Then he says the Commission's present authority to review proposed index futures contracts to ensure that they are not susceptible to manipulative activity would be expanded to include review of both the new and existing contracts and to permit consideration of the impact of these products on the orderly operation of the stock market. Do you have any problem with that?

Mr. PHELAN. No. As a matter of fact, you will notice in our written testimony, we also think that we're going to require the member firms to at least give us a yearly impact study on the products that they have and whether they've changed or not and what that does to their operational and financial performance. They must also tell us what they think that does to the exchange performance because we need to know how fast these products are changing and how many new people are entering into them. And as I used that comment before about our study of the institutions, the fact that only 9 percent of the 300 that we surveyed used them may be significant in itself, but more significant is that if we had done the survey 2 years ago practically none of them would have used them.

So that's an enormous change and that 9 percent or 10 percent or 20 percent if it continues to grow can have an incredible effect on risk allocation not only in the futures market but in the equities markets as well, and also on the systemic automated operations that we need both for our member firms and in our marketplace. So you need to have that information and you need to coordinate it in some way.

The CHAIRMAN. Now you commented briefly on the downtick rule and it's been alleged by very capable people that the downtick rule has been modified by the SEC so that it's ineffective. So you have a situation where Bear Stearns or Merrill Lynch are not allowed to sell on the downtick overall. Unless that is they're working for an investor who wants to sell and sell big so as to have some effect on the price of stocks. Then that particular investor is able to sell on the downtick rule without violating the present interpretation of that rule. The modification that was made is alleged to have had a considerable amount to do with the fact that there was a 500 point drop.

Mr. PHELAN. Well, first of all, I think the no-action letter by the SEC to Merrill Lynch, as we interpreted it, was extremely narrow and I think you need to get the SEC to interpret that again.

What we are concerned about is there are enormous rumors in the marketplace by any number of people that in fact the short selling rule is being ignored or there has been some other way around it. We have had our examiners out. The SEC has had their examiners out. We find no evidence of that.

But what disturbs me about this is it is much like insider trading before the Boesky incident in which we looked and other people looked at movements in stocks before the news was announced and somewhere in your gut, although you couldn't find it, you said somewhere there has to be leakage.

There is that same kind of comment about the short selling rule today in equities and we're very concerned about that.

As to what effect that might have had on the 500 point drop, I don't know. According to both the Brady report and the SEC report, most of the selling causing the heavy pressure on those 2 days was long selling and not short selling.

The **CHAIRMAN**. Well, I commend you to an article by Martin Mayer that appeared in Barron's.

Mr. **PHELAN**. I know that.

The **CHAIRMAN**. Are you familiar with that article?

Mr. **PHELAN**. Well, it disturbs me. We're out there looking for that evidence, and I'm very disturbed about that. Not only that article, but in the last 2 weeks I've had any number of people from the industry—none, however, who are practitioners in this area—who say that they are absolutely convinced there is a violation somewhere. As I say, we've had long talks with the SEC on it. They have examiners out. We have examiners out. And there may be some other—we do know you can go overseas. You can go to London and do it and that we do know. Some of it takes place. London doesn't report volume in trade transactions, so it's very difficult to find out. But we don't think at this point in time it's significant, but as I say, we're kind of flying blind on information. But short selling and the violation of short selling bothers us very much.

The **CHAIRMAN**. Thank you.

Senator Wirth.

ONE-SHARE-ONE-VOTE

Senator **WIRTH**. Just one further question. Some years ago, you were involved in an effort with a number of us to attempt to look at the one-share-one-vote issue. It's sort of distant from where we are today, but I suspect it's going to come up again here in the next month or 6 weeks.

What is your position, the New York Stock Exchange position, on one-share-one-vote and how do you answer those who say,

> I have a company that is structured in a different way and a one-share-one-vote standard is not fair to me to the structure of my company in a way that is unique to my particular goals and governing process.

Mr. **PHELAN**. At our board meeting yesterday, a public director said, after a big discussion about all this business, "Well, at least one thing it's done. It's got us off one-share-one-vote." And I said, "Not really."

Periodically we have a roundtable to which we invite about 18 chief executive officers of listed companies to come and see a demonstration on the floor after the close, 6:00 or 6:30, and then we have them up for dinner and we have a 2-hour discussion and get them out before 9 o'clock. The last one we had was 2 weeks ago and that's all they wanted to talk about. So it has not gone away.

The main thrust from our listed companies is that it ought to be changed and that, in effect, is what we have said and testified to before this committee. But if you ask my opinion I still like one-share-one-vote. But it seems to me in a changing world, as long as you can get an alternate method which we have proposed in which you go to your shareholders and if the majority of the shareholders and the majority of the independent directors say that it's all right to recapitalize, then you should be allowed to do so.

We have about 59 companies who have done that and we have that issue on hold while the SEC determines what to do in such situations We have 14 companies that no matter what kind of change you make would not have qualified because they didn't ask anyone and they went ahead and did it.

So I think that our proposal is somewhere between just getting rid of the whole thing altogether and keeping the old standard but trying in some way to adjust that standard to the modern world that we live in.

Senator **Wirth**. Thank you very much, Mr. Phelan.

The **Chairman**. Senator Graham.

Senator **Graham**. Mr. Phelan, I was recently in London and talked to some of the people involved in their securities markets and one thing that interested me is the difference in approach they take to the specialist for an individual stock.

As I understand it, they use a tiered system and for those largest corporations listed on the London Stock Exchange there are multiple specialists and then fewer numbers as the trading in that stock declines.

Has the New York Stock Exchange (a) evaluated the effect of the one specialist one stock process and its effect on the events of October 19 and (b) with that evaluation or independent of it, have you considered a multiple approach analogous to the one in the London Exchange?

Mr. **Phelan**. Actually, the events of the week of the 19th would tell you that you didn't want that type of system. You wouldn't want to have been dealing in that market on the 19th and, indeed, the over-the-counter market here had significant problems.

That pointed up two things. Here and in London the deepest pockets in the world were in those markets. Indeed, in the over-the-counter market here and on the London Stock Exchange, which is really an over-the-counter market, you had many of our member firms and banks making markets. It shows two things; that, one, in an avalanche of selling, money alone is not the criteria; and given their druthers most traders around the world are going to step away until a new base looks like it's being established before they come back in. I think there is a good rationale for that because if everybody loses their money then you've got no marketplace when it's over.

Our marketplace has one specialist but I think that's greatly misunderstood because we don't really depend on the one specialist for liquidity. Aside from their dealings when there is a temporary imbalance, we depend on the member firm community who come in and out with risk capital and block trading and other things as well. The real markets are made by the 47 million individual investors and the 13,000 institutions who are the real buyers and sellers in the market.

If you look at the 20th, for instance, after the opening the market had sold off and then kind of reached a calm around noon, and everybody was speculating whether that was the eye of the hurricane or whether the storm was over. The reason the market turned around in the next few days is because real buying came back into the market, value buyers, both institutions and individuals came into the market to do that.

So that any dealer system you have in ordinary times is to help to provide liquidity when there is an absence of that and in extraordinary times they at least try to cushion it down. We think one of the reasons our dealer system did better than the universe is because we have assigned responsibility and you can argue about whether some did or didn't and whether some were really exceptional and others weren't. But as a whole, the system under those incredible circumstances did well. And I think that's what the Commission report said as well. We have to deal with those at the margin and we will, but no one dealer system or no three dealer systems could help stem the kind of onslaught we had. The reason we think that our dealer system worked as well as it did under the circumstances is because we had assigned responsibility.

London was a clear example where they did not and everybody stood aside to wait until it balanced again. That's no criticism of their market. It's just that if you were to look at all markets on the week of the 19th and come to some conclusion, you would have come to a conclusion that multiple dealers had a fatal flaw. All I'm saying is traders are traders the world over, whether they be in stocks, options, futures, currencies, debt or whatever. And that given an avalanche of selling, the human instinct is to get out of the way for a while and then come back in when it stabilizes.

And that basically is what happened all over the world. If you look at the charts of different markets and different exchanges and different stocks, it's absolutely incredible. They almost all looked the same. Domestically, even the futures markets looked the same. London looked the same. Tokyo looked the same. Germany looked the same. Madrid looked the same. Paris looked the same. It's incredible. So they all had the same pressures at the same time. They all basically reacted in the same way. The difference was in the amount of the decline. Some went down further than others and then all moved sideways the same way. It's actually extraordinary. I don't know whether it's a comment on the instant liquidity that was sought all over the world by institutions and individuals, whether it had to do with technology and communications, but it surely shows that everything is getting more and more closely tied together.

Senator GRAHAM. Thank you.

The CHAIRMAN. Thank you very much, Chairman Phelan. If I had the time, I would ask you how it is that with the New York Stock Exchange the biggest equity market in the world and a very efficient market, with your superb leadership, why it is that Chicago has been able to run away with the futures? But that's something that maybe we can leave to another date. I'm sure it would take quite a while to discuss, so I'm not going to ask you that.

Mr. **Phelan**. Different market, different culture.

The **Chairman**. Very good.

Our final witness is Richard Fogel, Assistant Comptroller General. Mr. Fogel, we're happy to have you here. All of us have a great deal of admiration and respect for the General Accounting Office. You have the expertise and you have the objectivity and we're delighted to have you before us. You have a nice, concise statement, so go right ahead, sir.

STATEMENT OF RICHARD L. FOGEL, ASSISTANT COMPTROLLER, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY JOHN R. SCHULTZ AND CRAIG A. SIMMONS

Mr. **Fogel**. Thank you very much, Mr. Chairman. I'd like to introduce my two colleagues. On my right is Craig Simmons, who is our senior associate director in charge of all our financial institutions work. On my left is Randy Schultz, who is the project director for our work on the market crash.

What I'd like to do is just very briefly summarize the highlights of my statement and the details of our findings were presented in our report of January 26.

The issues, problems and concerns that we had fall into three broad areas.

First, we must protect the rest of the economy from the spillover effects of a sudden collapse in share prices.

Second, we must assure that the equity and futures markets function efficiently and effectively, and we found problems both within each market and among them.

Third, treatment of individual investors must be fair.

Now based on all the work we did, we think two areas deserve immediate attention.

First, the automated systems that helped the markets function smoothly must be assessed and changed, if necessary, to assure that they can handle the demand of modern markets. In that regard, we are very pleased with the actions that the New York Stock Exchange says it's taking to try to improve its automated systems.

Second and perhaps more important overall, is that coordinated contingency planning is urgently needed to prepare for any future crisis that may occur. What we found is that the Federal regulators and the SRO's did a very admirable job during the 19th and 20th, but basically they did it on an ad hoc basis. No intermarket, interagency contingency plans existed to help answer the question of what will happen next.

Accordingly, we believe that within the next 30 to 60 days the Federal regulatory agencies, perhaps with Treasury along with the SRO's, need to develop contingency plans that can result in several things.

First, agreement on and dissemination of information about how decisions made by both the CFTC and the SEC are made and communicated to the markets.

Second, agreements on steps to be taken during crises and those circumstances that would call for relaxation or interpretation of rules to facilitate market liquidity.

Third, agreements on Federal Reserve liquidity support mechanisms for market participants.

Now over the long term, we think several other things need to be done. We need to identify any problems which may be created by differing rules and procedures, such as margins, price limits, trading halts, market pricing mechanisms, or trading systems shutdowns that affect closely related stocks, stock index futures and options. And, indeed, the capability of the specialists and the other market making systems in the new market environment need to be studied.

But in essence, we are saying we would like to see the Congress give all the groups 30, maybe 60 days—but we're very comfortable—we know you asked people to come back in 30 days with proposals—to give them 30 days to come up with some plans and then, if you're not satisfied with those, then we think perhaps some additional actions need to be looked at.

[The complete prepared statement of Richard L. Fogel follows:]

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Preliminary Observations on the Market Crash of October 1987

Statement of
Richard L. Fogel
Assistant Comptroller General,
General Government Programs

Before the
Committee on Banking, Housing and Urban Affairs
United States Senate

GAO/T-GGD-88-10

Mr. Chairman and Members of the Committee, we are pleased to appear before you today to discuss the preliminary results of our ongoing efforts to examine what happened in the financial markets in October 1987.

The details of our preliminary observations on the October 1987 crash were presented last week in our January 26th report* and I would like to briefly highlight today the essence of that report.

The issues, problems, and concerns that we had fall into three broad areas.

-- We must protect the rest of the economy from the spillover effects of a sudden collapse in share prices. The Federal Reserve met its responsibilities effectively during the crisis but may face difficulties in the future if care is not taken in any relaxation of Glass-Steagall restrictions.

-- We must assure that the equity and futures markets function efficiently and effectively. We found problems both within each market and among them. Of special importance are the growing linkages between previously separate markets. There are also growing linkages between U.S. markets and those around the world. The structure of regulation for these markets needs to be examined, along with the relationship of the federal regulators to the markets. Ways should also be sought to harmonize regulation across national boundaries.

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*Available from the U.S. General Accounting Office

Within the U.S. markets, our work showed problems with automated trading systems. In addition, the market making process was severely strained in several markets and needs careful examination. We probably can never create a system that can withstand the pressures of the 19th and 20th, but there may be ways to improve or correct market capabilities.

-- Finally, treatment of individual investors must be fair. Numerous complaints, while not yet fully evaluated, raise the possibility that there were abuses of risk disclosure and suitability rules. In addition, individual investors probably faced unnecessary difficulties in gaining access to trading systems during October 19th and 20th.

In the short run, two areas deserve immediate attention. First, the automated systems that help the markets function smoothly must be assessed and changed, if necessary, to assure that they can handle the demands of modern markets. Our early work on automated systems concentrated on the New York Stock Exchange because of its pivotal role, but we need to look at evidence of problems in other markets. If the markets' institutional presence continues to evolve in the direction indicated by recent history, there is an urgent need for the private sector, with appropriate federal involvement, to overcome the problems in the automated systems that our January 26th report details.

The New York Stock Exchange was not prepared operationally for the volumes it experienced during the 19th and 20th of October. In the short term, an important question exists as to the extent to which the Exchange can accurately forecast trading volumes and related systems requirements. There are other issues concerning whether the Exchange's planned upgrade of its order processing systems will be capable of handling future traffic during peak periods in a way that is fair and equitable for all market participants.

Coordinated contingency planning is also urgently needed to prepare for any future crises that may occur. As the events of October unfolded, self- and federal regulatory officials maintained communications and made a number of decisions about how to react to market developments. Many market participants we spoke to gave high marks to both self-regulatory officials and federal regulators for their conduct during the crisis. However, most intermarket decisions by the market officials and federal regulators had to be made as events unfolded on essentially an ad hoc basis. Intermarket confusion existed at various times about which stocks were trading, the permissibility of corporations buying back their stocks at particular times, and most significantly, whether the New York Stock Exchange would remain open on Tuesday, October 20th. Although uncertainty in these situations probably can never be completely resolved, it should be reduced to the extent possible.

No intermarket interagency contingency plans existed to help answer the question, "What will happen next?"

Accordingly, we believe the federal regulatory agencies, the SEC, CFTC, the Federal Reserve, and the Treasury, along with the SROs should immediately develop contingency plans that result in

-- Agreement on and dissemination of information about how decisions made by both the CFTC and SEC are made and communicated to markets. These should include agreements on how unilateral decisions by markets will be coordinated and disagreements resolved.

-- Agreements on steps to be taken during crises, and those circumstances that would call for a relaxation or interpretation of rules to facilitate market liquidity. Some steps might include consideration of the various kinds of price limits, trading halts, or other methods which may be needed to give the markets time to obtain and evaluate key information.

-- Agreements on Federal Reserve liquidity support mechanisms for market participants. Because public dissemination of such plans could result in excessive risk taking by market participants, some believe that its specifics should not be revealed.

It may be sufficient that the public knows that such plans exist.

Over the long run, greater efforts are needed to improve the regulation of the linked markets. We need to identify any problems which may be created by differing rules and procedures, such as margins, price limits, trading halts, market pricing mechanisms or trading system shutdowns that affect closely related stocks, stock index futures, and options. The capabilities of the specialists and other market making systems in the new market environment need to be studied, with the objective of strengthening their capabilities.

This concludes my prepared statement. We would be pleased to respond to your questions.

The CHAIRMAN. Thank you, sir. Thank you for a very concise presentation and for a fine written statement.

PROCESSING PROBLEMS

Mr. Fogel, the GAO report refers on page 73, "to significant processing problems involving volumes in excess of some systems." Capacity systems design limitations that were exposed by the heavy volume and hardware and software failures. That was during October 19 and 20.

In fact, your report states on that page that operating problems occurred on 9 of the exchanges' 12 major automated systems on these 2 days.

What actions do you think that the New York Stock Exchange should take to remedy these deficiencies, particularly in light of the response we got this morning from Mr. Phelan?

Mr. FOGEL. Well, we think the actions that Mr. Phelan outlined this morning are going the right way.

The CHAIRMAN. Are they sufficient?

Mr. FOGEL. We don't know at this point in time. What we think that is important to do is to have some outside group work with the exchange to assess the adequacy of what they propose to do. We believe that's important when you're looking at any type of computer operations, to have someone who's not real close to it come in and take a look at the adequacy of it.

The CHAIRMAN. Who would you suggest for that, GAO?

Mr. FOGEL. Well, we would be glad to take a look at what they propose, but before we get involved I think we also think it's very important that the SEC have the capability to assess what the New York Stock Exchange proposes, and in that regard we think the SEC needs some more resources and some more expertise to do that.

But the GAO could go in and look at it, but we would certainly think that as a first step the New York Exchange might want to call in an outside group of experts to take a look at what they're proposing.

The CHAIRMAN. Do you concur in the confident assertion by Chairman Phelan that they could now handle a 600 million share day without interruption and without any problems that they had on Black Monday?

Mr. FOGEL. I'm not sure that we could concur until we took a look a little more in depth at what the specifics of what they propose are.

The CHAIRMAN. During the past few days this committee has heard small investors have made a large number of complaints regarding their treatment during the crash. Senator Sasser pursued that line very effectively. It's agreed that the small investor had difficulty accessing the market on October 19 and 20. Moreover, your testimony refers "to the possibility that there were abuses of risk disclosure suitability rules." We've all read horror stories in the press that relate to this issue.

Has the GAO conducted an independent analysis of consumer complaints following the stock market crash?

Mr. **Fogel**. We have not as yet done that, Mr. Chairman. We did compile, and the details are on page 52 of our report, the types of complaints that people said they had.

Most of the complaints had to do with the ability to execute orders. We intend to try to follow up more to look into that in depth, but as of this point in time we haven't conducted an independent assessment. We also got a lot of information regarding something referred to this morning, and I know it's been referred to earlier in the week, about the inability of people to get through because the phones were all clogged up. That has to do with execution and we're aware that NASD has tried to take some actions to improve that.

The **Chairman**. Do you have any proposals that would better protect the general public's interest in the future and the general investors' interests?

Mr. **Fogel**. Not specifically at this point in time. We are very concerned that any changes that are made take into account the need to ensure fair and equitable treatment for all people in the markets. I think we are pleased that NASD has proposed those things.

Based on what we've heard from talking to people, we're concerned about adequate enforcement of the suitability rules, for example. We're concerned about making sure that in the futures market people really understand the paperwork that's given to them that explains the risks.

I don't know that you need different regulation. It may be a question of how efficiently and effectively we enforce the regulation already on the books.

GLOBAL MARKET

The **Chairman**. The GAO report in common with several other studies of the market crash all testify to the fact that financial markets are integrated both within and outside the United States. We've talked about one global market.

In your testimony you recommend that ways "should be sought to harmonize regulation across national boundaries."

Do you have any specific proposals that would achieve that objective?

Mr. **Fogel**. I'd like to let Mr. Simmons answer that in a little more detail. I think, going along with what Senator Wirth said this morning, we see that there has to be some phasing of trying to deal with the problems. Once you deal with our problems in this country, we think we've got to look at what's going on in London and Tokyo. It becomes more difficult then because you've got to decide who's going to be dealing with those people overseas.

Mr. **Simmons**. I really don't have much to add to that. It seems to me that the proposal by the Governor of the Bank of England the other day might be a good start. He has proposed getting the securities regulators together to begin discussing how they might work out these intermarket problems that they have.

The **Chairman**. Senator Wirth.

Senator **Wirth**. Thank you, Mr. Chairman.

Gentlemen, thank you very much for the usual excellent work done by the GAO and your professionalism.

I'd like to pick up on that last comment on the Bank of England proposal and the Kaufman proposal. Henry Kaufman, as you know, has a proposal that we ought to create a kind of international oversight group. It does impress me that it's a bit difficult for us in the United States to think about that when we're so balkanized here. We have absolutely no voice—who would we send to sit at the table? We'd probably have a squabble between the SEC, the CFTC, the Fed, and the Treasury as to who is going to be the lead person sitting at the head of the table on behalf of the United States. It's difficult to think that we could do that. Is that correct?

Mr. SIMMONS. I think that is a problem, yes.

Senator WIRTH. We've got to do our own homework here.

Mr. SIMMONS. I think the central banks in the other countries typically do have the securities as part of their regulatory structure embedded in the banking and we are organized differently.

Senator WIRTH. So the coordination problem comes back to us from the international side as well and we have to sort out our own backyard first and foremost, which again is one of the chores I think that we face.

Let me just quote from your report and ask you to expand on this a little bit. You say the events of October clearly establish the need for some continuing coordinated intermarket regulation to implement emergency plans, make decisions about some issues such as margins, trading limits or other suggestions being made to address intermarket linkages and reconcile these issues with other national and international factors.

You then go on to say that—you put this caveat in:

> However, these industries are primarily self-regulated with differing levels and types of Federal roles all previously debated by the Congress. If any attempt is made to consolidate the agencies, these roles and relationships would have to be carefully thought out.

Is that an extensive process? How do we go about doing that? You are observers of the Congress as well as of this problem. What we're trying to do is figure out how to neutralize a lot of the veto power that exists. We need a process of analysis so we can start to create some sort of agreement as to what this harmonization or rationalization of the regulatory process ought to be.

Mr. FOGEL. Well, it seems to me that one of the things you have to ask when you begin to look at that is, what's broke and what problems are we trying to correct? There's a lot of activities, for example, that the CFTC and the SEC are involved in, day to day activities of regulating their markets, that they do pretty well and really don't cross each other's paths. So one of the things we've debated ourselves on this is whether you really need to bring all that together. Many activities function fairly smoothly. It's all these linkages, where the markets are linked, that becomes more difficult.

We're not quite sure at this point in time that you need a permanent change in the regulatory structure to deal with these intermarket linkages and that's one of the key issues. Obviously, when we talk about contingency planning and it gets into some of the longer range issues too, there has to be a plan for better coordination and communication. There has to be much better processes for deciding, for example, when the markets are going to stay open and stay closed because that was a critical issue on Tuesday. We don't have that right now.

So what we think you've got to do is detail those specific things and then you've got to decide what type of structure you want to address those problems.

Senator **Wirth**. All right. I find myself in great agreement with what you're saying. It seems to me that it's similar to what other witnesses have said in this last week, that a lot of the internal workings of these markets are well-regulated and self-regulated and they don't have much to do with the other markets.

What we're trying to look at is not only the areas of overlap and the areas of gap, but where should we as a national economy trying to coordinate this so that we can speak more clearly in an international sense. We're looking for gaps. We're looking for overlaps and we're looking for some kind of ability to create an international voice.

We have a couple of choices facing us here—three, I guess. One is to do nothing. A second is to assume that we have enough knowledge to move into this right now and make the decision as to what this mechanism would be. And a third is to reflect upon what you said in your conclusions, that we have to learn a lot more about this.

So, therefore, I would conclude—and I guess this is what you conclude—that we've got to set up some kind of a phased mechanism here to get the various parties together and look at this very carefully. It's a very delicate mechanism. We can make a significant error in this. We've got to set up a process right away in the Congress. We've got to set up that process now to start the movement toward the examination and discovery of the gaps, the overlaps and our international voice. Is that right?

Mr. **Fogel**. Yes, I agree with that, Senator. We think there has to be some sense of urgency that the Congress exhibits in terms of trying to get, for example, the Federal regulators and the SRO's together to do this, though.

Senator **Wirth**. We've got to make them do it, I think.

Mr. **Fogel**. That's right. I don't think we would feel very comfortable if they took 6 months, 1 year or 2 years to study this thing and didn't come to any resolution.

Senator **Wirth**. I think we have to require them to do it and that's as far as we ought to go legislatively right now, to lay out that charter and tell them to do it and to do it by a certain time and get back to us. To go beyond that at this point is a little presumptuous of us, given not only all the political disagreement out there and the thicket we're going to get into, but the fact that we don't know enough to make that decision now.

Mr. **Fogel**. I think that's a position we would agree with, yes, sir.

Senator **Wirth**. Thank you very much, Mr. Chairman.

The **Chairman**. Senator Graham.

Senator **Graham**. I'd like to pursue the line of questions that Senator Wirth has been doing.

To what extent do you feel that the current relatively low level of cooperation among international securities markets—yesterday we had some very strong testimony about the quality of that relation in the futures market—is a function of the internal diffusion and decentralization of decision making within the U.S. structure?

Mr. **Fogel**. I don't think we have much of an opinion on the international problems. I think that in terms of where we are in the United States today vis-a-vis New York and Chicago, I think we're somewhat encouraged by the proposals in the last week—but being somewhat cynical, I'm impressed that all these groups have come forward the day before they testified before you with proposals, but I think that's the way it's got to go, that there has to be a confluence of opinion among our own markets as to what's good for everyone and not just looking at their own particular situation.

But as to how that relates to the international situation, we just haven't looked at that.

Senator **Graham**. I guess the question—and maybe if you have not looked at it, maybe you might do so based on your recent experience of analyzing our domestic issues—is what have been the constraints or the absence of incentives which to date have led to relatively modest extent of international discussion, cooperation and agreement in the securities market in contrast to the extensive relationships which exist in the banking sector?

Mr. **Fogel**. Well, one opinion I'd have is that perhaps it takes something like the events of last October for us all to realize how linked everything is. Certainly there's been discussion that the markets are linked. We observed this a couple years ago and other people have earlier than this, talking about the linkage between the equities markets and the futures markets, but it becomes much more vivid when you have a crisis. Perhaps there has not been as much of a realization in the international community of how linked things are, as there obviously has been in the banking area.

Mr. **Schultz**. I think we also have to recognize, Senator, that the growth of international equity markets of course compared to international banking has been relatively new and that there have been some attempts, as this committee I'm sure is well aware of, at bilateral agreements and meetings on things like sharing of information, trading abuses, and competitive factors, too.

It is not as well developed, however, as it is on the banking side and certainly events of the 19th and 20th should give impetus toward all of those regulators getting together. There have been, as you're probably aware, rounds of meetings of several of the nations taking place even within the last couple of weeks.

So, if nothing else, the 19th and 20th gives impetus to that kind of thing.

The **Chairman**. If the Senator from Florida would just yield for an observation, the most overwhelming development in finance has been the internationalization of finance and the huge increase in flows between countries—Japan and the United States, United Kingdom—just enormous, and it's come on with a great, great rush, doubling, tripling every year. I think this is something we're not up to speed on.

Senator **Graham**. Mr. Chairman, I'd like in my remaining time to shift to another topic.

In your statement on page 1 under the category "Issues, Problems and Concerns," the first one concludes with this sentence:

The Federal Reserve met its responsibilities effectively during the crisis, but may face difficulties in the future if care is not taken in any relaxation of Glass-Steagall restrictions.

FED MAY FACE FUTURE DIFFICULTIES

That's an issue of considerable interest to this committee. Would you elaborate on what you see as those potential future difficulties?

Mr. FOGEL. Well, I don't know that we see them as difficulties, but the concerns we have are that if you relax Glass-Steagall we're concerned about liquidity and the safety and soundness of the banking system. And our concern is that if you have the banking area getting into the securities business, we think that the Fed has to become more involved from both a supervision and an auditing perspective to make sure that whatever rules and regulations are put in place are in fact followed by the industry.

So that's what we're saying there, that if there is a relaxation and the banks get more involved, the Fed has to be fairly aggressive in auditing and in supervising how the rules and regulations are followed.

Senator GRAHAM. If I could just comment on that, Mr. Chairman, that statement is consistent with a concern that I have had as a product of looking at what's happened to the thrift industry and also the experience in England where they did in fact take considerable time and direct attention to the necessary changes, both in standards but particularly in personnel and competence, that accompanied their October 1986 changes.

I would appreciate it if you might in written form give us a more detailed statement of what you think some of those areas of Federal Reserve attention prior to relaxation of Glass-Steagall should be.

Mr. FOGEL. We would be pleased to do that.

The CHAIRMAN. On that subject, the Fed supports the participation of banks in securities selling and the repeal of Glass-Steagall as proposed by the committee.

Of course, the Fed has the competence and also they are not known as a reckless, irresponsible agency.

Senator Wirth.

Senator WIRTH. Going back to this process of a process of setting up a coordinating mechanism—I'm not quite sure how else to define it—or phased harmonization, you all have just spent 4 months looking at this issue and you're as up to speed, I suppose, as just about anybody that we work with in the Government.

Would it be possible for you to work with the committee or work with our staffs in trying to figure out how we might craft the language for the charter that you're talking about? Is GAO allowed to do that sort of thing? Can we ask you to do that? What would that charter look like?

Mr. FOGEL. Yes, we would be pleased to do that. For example, let's say that in 30 days, if the committee isn't satisfied with the progress—and to answer that question you've got to have someone go in, and we'd be glad to help you do this and assess what's going on—when everyone has reported back to you, then we think you would have to explore some possible alternative, maybe short-term arrangements, to facilitate these people coming together. We would be glad to work with you on that.

Senator **Graham**. There are two parts to the issue. One is the structure, and the second is the kind of timeframe that you're just talking about, that you do it with the right charter and then set up the kind of milestones so that you can force the sense of urgency that I think Senator Graham and I share with you about the need to do this. We look forward to that. Thank you very much.

Thank you, Mr. Chairman.

The **Chairman**. Thank you. Before you leave, I'd just like to announce that this concludes our hearings and we expect to have reports from the regulators by March 4 on their recommendations for legislation. We then expect to draft the legislation and hold hearings on the legislation.

Thank you very much.

The committee stands adjourned.

[Whereupon, at 11:55 a.m., the hearing was adjourned.]

[Response to written questions and additional material supplied for the record follow:]

Chairman Greenspan's Response to Written Question from Senator Proxmire in Connection with the Hearing Held on February 2, 1988

Q.1. Would you please provide data and a technical explanation for the record of the Federal Reserve's efforts to first provide and then withdraw the temporary liquidity provided to the market in the aftermath of the stock market crash in October of 1987.

The Federal Reserve provided liquidity temporarily following the stock market collapse to meet extra demands for reserves arising from two sources. One was an enhanced demand for excess reserves by depository institutions; the other was an increased demand for required reserves to back higher levels of demand deposits and NOW accounts. In addition, the Federal Reserve undertook a measured easing of overall reserve pressures as the balance of risks in the economy shifted in the aftermath of the crash. These reserve needs were met through open market operations in the form of daily repurchase transactions in the market from October 20 through November 2. The maturity of the RPs ranged from overnight to four days, and on several days the System entered the market earlier than usual to reassure markets of our intentions. The frequency of our operations was intended to quell market fears; the size was sufficient to meet the increased reserve needs.

The unusual demand for reserves abated in November. Excess reserves declined, and the bulge in deposits reversed. The Federal Reserve accommodated the decrease in demands for reserves associated with the return toward more normal conditions. Owing to seasonal increases in currency outstanding and deposits, the desk continued to face a need to add reserves in November as the previous repurchase agreements expired, which it met through additional repurchase agreements and outright purchases of securities in the open market. But these actions to add reserves were trimmed back to take account of the reversal of the unusual liquidity and reserve demands that had been associated with the stock market collapse.

There are several measures that can be used to gauge the Federal Reserve's reserve provision after the stock market decline of October 19. One is nonborrowed reserves--these are the reserves that are available to depository institutions without going into the discount window and are the most direct reflection of our open market operations. These reserves rose $800 million to $58.3 billion in the 2-week reserve maintenance ending November 4, the first period following the crash. They fell around $600 million to $57.4 billion over the subsequent two maintenance periods. (These data are not seasonally adjusted; the Federal Reserve does not compute seasonals for two-week reserve data. However, the bulge in deposits was much larger on a seasonally adjusted basis than not seasonally adjusted, and it is reasonable to presume that the reserve movements, both up and down, also would have been larger if seasonally adjusted. Monthly reserve data are seasonally adjusted; on this basis, nonborrowed reserves increased at a 14-3/4 percent annual rate in October, before declining at a 5 percent annual rate in November.)

Another view of our operations can be had from looking at "net free reserves", which is the excess of reserves we supply over what depository institutions need to back deposits. In the November 4 statement period, these rose to $1,275 million from $440 million the previous two weeks, also indicating a more generous stance of reserve provision. Net free reserves dropped off to average $630 million in the next two maintenance periods. The higher level of free reserves relative to before October 19 reflected accommodation of some continued higher demands for excess reserves and the easing of monetary policy to encourage progress toward more normal market functioning and to support the economy after the stock market collapse.

Chairman Greenspan's Response to Written Questions from Senator Riegle, Jr. in Connection with the Hearing Held on February 2, 1988

Q.1. According to the Brady Report on Tuesday, October 20 a widespread credit breakdown seemed for a period of time quite possible. What major demands for bank credit were made on October 19 and 20? How serious a threat was there of a widespread credit breakdown on October 20. How was such a credit breakdown avoided and what has been learned from this experience?

Answer:

When securities prices fall sharply as they did last October, banks and other providers of credit quite naturally become concerned about the impact of these developments on the financial health of securities firms, and, as a result, tend to adopt an added degree of caution in their lending to these firms. For example, in interviews we conducted with a sizeable number (22 in all) of major banking organizations on their lending activities over the week of the market crisis, they generally reported that in response to developments in the stock market, their senior management carefully reviewed approved credit lines for securities brokers, closely monitored requests from these firms for additional credit and were in frequent contact with firms to obtain up-to-the minute reports on their financial status. In exercising this altogether appropriate degree of caution, however, it is also important, that banking organizations be prepared to provide credit to established customers that remain in solid financial conditions, so that these customers can carry out their important market-making activities.

Banking organizations appear to have struck an appropriate balance between exercising paper concerns for their own safety and soundness and at the same time providing adequate credit assistance to securities firms during the time of the market crisis. The findings of the previously mentioned interviews revealed that the aggregate of loans extended to brokers and dealers by banking organizations increased substantially during the week of the crisis. Moreover, the great majority of the organizations interviewed reported that they called no outstanding loans to securities firms and responded in full to requests for additional credit by established customers. We found that certain banking organizations required security firm customers to post collateral on previously unsecured loans, and required others to upgrade collateral arrangements (by having collateral shifted from a segregated account on the premises of the borrower to the possession of a third party). And there were a few situations in which loans to certain customers were not renewed. But such cases were relatively small in number and involved credit of only a marginal amount relative to either the total volume of loans outstanding at the start of the crisis or to the volume of additional credit extended during the time of the crisis.

It is our view that the actions taken by the Federal Reserve during the market crisis played a most important role in assuring that an adequate volume of credit was made available to securities firms. In brief, we issued a public announcement before the stock market opened on October 20 affirming our readiness to serve as a source of liquidity support for the economic and financial system. And we carried through on that affirmation by arranging substantial volumes of repurchase agreements on October 20 and each succeeding business day through the end of October. We also stood ready, if conditions had made it necessary, to provide appropriate liquidity assistance through loans at Reserve Bank discount windows. We also contacted many securities firms and banking organizations during the week of the crisis to provide them with additional assurance of our intentions to take actions necessary to minimize liquidity strains. In those conversations with lenders, moreover, we pointed to the need for these organizations to carry out their traditional role under such conditions of providing adequate credit assistance to securities customers, consistent, of course, with concerns for their own safety and soundness. We believe these efforts worked to keep liquidity strains to a minimum during the week of the crisis. We are prepared of course to institute similar measures in the future should the need arise.

Q.2. According to a **New York Times** article published January 11, 1988, "the Fed's system for transferring sums between banks broke down Tuesday (Oct. 20) for about an hour, according to a number of bankers." Did that actually happen and, if so, what steps have been taken to ensure that the electronic network system works without slowdown in the future?

Answer:

The entire Fedwire system did not "breakdown" on October 20. The Federal Reserve Bank of Chicago, which operates one of the twelve Fedwire computer centers, experienced two hour-long outages between the hours of 10 a.m. and 12:30 p.m. (CST). Our investigation did not uncover any disruptions in the markets or payment activities as a result of the Chicago Reserve Bank outages.

A major focus of the Federal Reserve is to ensure the reliability of the Fedwire payment system and the payment mechanism as a whole. Many steps have been adopted to reduce the likelihood of outages and a number of additional actions are under study. The System achieved over 99 percent up-time for 1987, and is continually working to achieve an even greater reliability percentage. For outages of short-term duration, the Reserve Banks maintain duplicate computer equipment on-site. In the event of a longer-term outage caused by fire, earthquake, and so on, the Federal Reserve has established a Contingency Processing Center in Culpeper, Virginia. This center can be used for processing Fedwire payments as a replacement for the Reserve Bank that is unable to operate.

Q.3 According to a number of commentators, one of the main problems surrounding the events of October 19 and 20 is the cash settlement feature of index futures and options. These people argue that cash settlement creates a liquidity imbalance in the marketplace by allowing one group of players to exit the game without paying all their dues. What is your response to suggestions that cash settlement of index vehicles be replaced with settlement in kind?

Answer:

The cash settlement procedure for index futures and options was intended to solve the problems that occur because delivery of the underlying stocks would be costly or difficult. Actual delivery of individual shares, especially in an index comprising a large number of stocks, likely would be cumbersome and expensive and might reduce the attractiveness of the contracts to commercial hedgers. Investors in futures who wish to avoid delivery presumably could close out their contracts in advance of expiration. In this regard, a large proportion of futures contracts currently are closed or rolled over prior to expiration, and settlement in kind might increase this activity. Option writers, however, would face the risk that they might be required to take or provide delivery of underlying stocks at any time.

Cash settlement does reduce the transactions costs of operating in futures and options markets for index instruments and probably enhances their liquidity. In general, liquidity and low transactions costs are a desirable feature of markets. While some have argued that an overly optimistic assessment of the liquidity of these markets may have contributed to the stock price increase through August, I doubt that it was their cash-settlement aspect that led to this misperception. The relevant exchanges may decide on their own to change settlement procedures, but a regulatory mandate along these lines should not be undertaken without thorough consideration of whether the form of settlement contributed appreciably to market difficulties.

Chairman Greenspan's Response to Written Questions from Senator Graham in Connection with the Hearing Held on February 2, 1988

Q.1. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th. What impact, if any did the liquidation of the mutual funds play in the downturn of October 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquify?

Answer:

Data provided in the Brady Commission Report suggest that the largest equity funds were net sellers of equities on October 16, 19, and 20. However, when judged against the level of redemptions facing the funds, and when compared to the dollar volume of trading on those days, the sales appear relatively small.

Several factors worked to attenuate the role of mutual funds in the market plunge. Mutual funds, faced with redemption requests, do not necessarily have to sell equities. Some redemption requests can be met with inflows of funds from purchases of shares by other investors or with reductions in holdings of liquid assets. In meeting redemption requests in October, many funds responded by lowering liquid assets, which are held for such purposes. Mutual funds differ in the levels of cash or liquid assets that they routinely hold. Some funds have an investment policy of maintaining low cash positions, and such institutions were necessarily heavy sellers in mid-October, as detailed in the Brady Report.

The preponderance of the evidence suggests that individuals, either directly, or through intermediaries such as mutual funds, did not play a very large role in the stock market plunge.

Q.2. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th and 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

The Securities and Exchange Commission rule on short sales was originally imposed to prevent trading that was believed to be manipulative or destabilizing. Through the years, some minor exceptions to this rule have been made to facilitate the functioning of markets, largely by easing the rule in transactions involving certain arbitrage positions. To my knowledge, no additional exemptions or waivers were made on the 19th and 20th. In their report on the market plunge, SEC staff concluded, "Nor do we believe that the staff interpretive position providing for a narrow exemption from the Rule [on short sales] for certain bona fide arbitrage activity substantially contributed to price volatility during the market break." Some observers have argued that the short sale rule exacerbated the dysfunctions of markets during October by making arbitrage activity between the cash and stock-index futures markets more difficult.

ANSWERS TO QUESTIONS FOR THE RECORD FROM LEO MELAMED, CHICAGO MERCANTILE EXCHANGE, TO SENATOR WILLIAM PROXMIRE

1. What specific steps do you plan to prohibit frontrunning?

The Chicago Mercantile Exchange currently prohibits inter-market frontrunning against customer orders, pursuant to its rules prohibiting fraud, bad faith, and manipulation. (Rule 432)

The futures industry received high praise for its surveillance procedures in numerous reports dealing with the October market break. The surveillance group at the CME investigates any serious complaint dealing with market violations including frontrunning.

Effective October 1, 1986, the CFTC required all futures exchanges to have in place systems designed to capture trade data for all transactions effected on their floors within one minute of execution. These audit trails permit accurate reconstruction of trading in a timely manner. As stated by the Brady Commission, these systems are superior to anything available in the securities industry.

In response to the October market break, the CME proposed formation of an Inter-Market Coordination Committee. This committee would facilitate the intermarket information flows needed to detect and prevent intermarket frontrunning abuses.

2. **What specific steps do you think the regulatory agencies, the other self-regulatory organizations and the Congress should take to prohibit frontrunning?**

The CME actively cooperates with inter-market surveillance efforts of all types, including investigations of frontrunning against customer orders. To further this cooperation, we have proposed formation of an inter-market coordination committee, which would include all securities and commodities exchanges, as well as the SEC, CFTC, National Futures Association, and the Federal Reserve Board. The CME hopes that this organization will raise the quality of audit trail information in the securities industry to the level already attained by futures exchanges.

While the CME agrees that the SEC and CFTC should have authority to require inter-exchange information flows, we do not believe that prohibition of frontrunning requires a new layer of federal regulation. No investigation or report has demonstrated any serious problems of inter-market frontrunning with stock index futures and options, as opposed to options on individual stocks. Because inter-market frontrunning in stock index products becomes profitable only when a customer order is large enough to significantly move the entire stock market, these abuses are relatively easy to detect and control. The Exchange believes that its proposals, in combination with tools already in place, provide superior protection against frontrunning.

3. A major source of complaints during the October market turmoil was the opening pricing procedures of various exchanges (e.g., The Chicago Board of Options Exchange and the NYSE). How are opening prices determined at the various exchanges and what changes, if any, would you recommend?

Futures exchanges allow supply and demand to determine prices immediately at the opening bell. In contrast, securities exchanges such as the NYSE attempt to moderate price moves to maintain a "fair and orderly market." The securities market philosophy frequently prevents the immediate opening of stocks that face large order imbalances.

The CME believes that the timely opening of our market contributes to the overall liquidity and efficiency of the equity market. We also have no reason to believe that many of the complaints mentioned by this question originated in our market; we estimate that less than 2% of customer complaints related to the October crash have been directed at futures markets. None the less, we recognize that the kind of radical price moves experienced by all equity markets in October may justify extraordinary controls.

We feel that the opening presents a special problem, since investors may have little information about where the price will open. Accordingly, we have proposed opening price limits of 5 S&P index points, to remain in effect for as much as the first 10 minutes of scheduled trading. These price limits cannot prevent the market from reaching its equilibrium price, but they may allow investors time to react to large price moves. We feel that these limits represent an important and beneficial adjustment to our procedures.

4. On October 20, when the CME closed at 12:15 p.m. the reaction of the stock market was dramatic: the Dow rallied 125 points in the next 45 minutes. When the futures markets reopened just after 1:00 p.m., the Dow lost almost 100 points in the next half hour. How do you account for this behavior and what does this say about the relationship of these two markets. To what extent is each dependent upon another?

The stock market experienced severe volatility, and many rapid advances and declines during the week of October 19-23. The price changes that occurred around the emergency CME trading halt on October 20 represented only a small piece of this puzzle, and an analysis of the entire period shows no simple correlation between the activity on various markets and the behavior of stock prices.

To begin with, several of the most significant rallies during this week occurred at times when the futures markets were open and the stock markets were virtually closed because of order imbalances. At the open on both October 20 and October 21, for example, the Dow rallied by 150 to 175 points, despite the fact that most stocks could not trade actively. During these periods, only the futures markets accurately recorded changes in investor sentiment; the stock market simply ratified the new prices when stocks finally did open. In fact, the opening rally on October 20 came to an end and went into a sharp reverse as the stock market began actively trading.

Furthermore, the critical rally on October 20 to which this question refers occurred at a time when there was little trading on the stock market; there have even been allegations that most of the rally took place in the thinly traded MMI contract at the Chicago Board of Trade. Careful analysis by academic researchers have estimated a mean time between trades for an average NYSE stock at around 20 minutes during much of this period, indicating that the stock market was effectively closed.[1] Thus, the 12:15 rally may actually have taken place primarily in a futures market, with the stocks again ratifying the price change as they reopened.

Stock prices did enter a steep decline some 10 to 15 minutes after the S&P futures reopened, although this decline was no different than many others that occurred throughout the crash. The price recovered rapidly during the afternoon, as strong trading resumed in both the stock and futures markets. Again, the strongest price increase occurred during a period of activity, rather than inactivity, in futures.

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[1] Lawrence Harris, "Nonsynchronous Trading and the S&P 500 Stock-Futures Basis in October 1987"

Finally, it is useful to note that the dramatic price decline that occurred on October 26 -- the second largest in stock market history -- took place on a day when the futures market was extremely inactive, and traded less than half its normal volume.

As a careful analysis demonstrates, the Committee's question vastly oversimplifies the complex market situation of October 20, during which numerous policy decisions were made, and numerous markets opened and closed. We believe that the 12:15 rally probably had far more to do with Federal Reserve efforts to supply liquidity, news of impending corporate stock buybacks, and news that the NYSE would not close, than with actions taken by the CME. We see no overall correlation between activity in futures markets and price movements in stocks.

5. **The Brady Report observes that three portfolio insurers alone accounted for sales of $2.8 billion in index futures and $2 billion in stocks. It also notes that three mutual fund groups accounted for $900 million in stock sales. So, out of thousands of institutional players, a mere handful set the stage for the greatest fall in history. What issues does such concentration of market power raise and how should they be addressed?**

Although trading by large institutions represented an important component of volume on October 19, the data provides little support for the claim that institutional fund managers "set the stage" for the crash.

The largest 10 sellers of stock on October 19 accounted for about 15% of stock market sales. This "concentration" ratio, which is very small by the standards of most U.S. industries, demonstrates that the vast majority of selling pressure did not come from this "handful" of traders. Furthermore, we have no evidence to suggest that trading by institutions represented a larger market share on October 19 than it would during normal periods. In fact, the extreme difficulty that many retail customers experienced in reaching their brokers indicates that retail selling was also very strong during the crash, and that retail investors were initiating sell orders as fast as brokerage capacity permitted.

The Committee should also recognize that many of the largest traders simply execute independent decisions made by their customers. Thus, for example, the mutual funds mentioned in this question were obeying "sell" instructions generated independently by individual customers. Similarly, the largest institutional fund managers each represent approximately 50 to 75 separate institutional investors. These investors each determine the strategy and decision rules by which their funds will be managed; they merely delegate the actual execution to a fund manager. Thus the simple statistics present a misleading picture of "concentration."

Finally, the idea that an investor's responsibility for the crash is proportional to his selling volume vastly oversimplifies reality. Prices fall because investors as a whole change their views and expectations about the market, a process which can happen without any trading, as it did between the close on October 16 and the open on October 19. Trading registers these changes in expectations, but does not "cause" them -- if the majority of investors who do not trade on any given day disagree with the new price, they can quickly reverse the verdict of the traders. Because we see no evidence that non-traders during the crash disagreed with the post-crash price, we see no reason to pin responsibility for the crash on any particular group.

6. On October 1, 1987, how much leverage could an institutional speculator have obtained when buying a stock index futures contract on the CME?

On October 1, 1987 the initial margin for a speculative position for one S&P Contract was $10,000. The contract value on October 1, 1987 was $165,850, making the margin requirement 6.03% of the contract value.

7) On February 1, 1988 how much leverage could the institutional investor have obtained when buying a stock index futures contract on the CME?

On February 1, 1988, a speculator would have put up $15,000 per contract. Because the contract had a face value of $128,175, the margin requirement represented 11.7% of contract value.

While the CME has no trouble agreeing on the factual answers to questions 6 and 7, we dispute the implication that "institutional speculator(s)" represent a problem, which margin requirements should correct. First, we have no evidence that institutions typically use the futures market to speculate. Most institutional investors face strict limitations on the amount of leverage that they may take. Certainly portfolio insurance, which involves the sale of short futures against an existing long equity position, represents an unleveraged and non-speculative use of futures.

Second, we reject the notion that institutions use index futures to control disproportionate amounts of equity. The largest position ever held by one institution in our market is less than $3 billion. In contrast, many of the institutions that use our markets hold portfolios of $10 to $15 billion in stock. If "speculation" by these institutions were a problem, which it is not, then policy should logically focus on their direct access to the equity market, rather than on their use of futures.

Third, the Committee must realize that futures margins do not serve the same role that stock margins serve. Unlike stock margins, which serve as a down payment on an asset, futures margins provide a risk management tool to protect the financial integrity of the clearing house. The Exchange raises and lowers margin to reflect changes in market volatility, as reflected in the increases between October 1, and October 29, and the subsequent reduction to the level of February 1.

Unlike stock margins, which allow five days for settlement, futures margins must be paid in full within one day, and must be replenished within one day whenever a loss occurs. This policy difference can create a dramatically different level of risk: an investor who bought a long S&P futures contract at the opening on

October 16 would have put up $58,000, or about 40% of the initial value of the contract by the morning of October 20. The same investor with a position in stocks would have had no margin deposit on October 20, and would have put no money up for another three business days.

In addition, since S&P futures margin controls the risk on a diversified basket of stocks, it achieves the same level of safety at much lower percentage level than does margin on individual stock. Financial researchers generally estimate that diversified portfolio generates about 30% of the risk of an equal dollar value position in a single stock. Thus margins on individual stocks do not compare directly to margins on a diversified basket of stocks.

ANSWERS TO QUESTIONS FOR THE RECORD FROM LEO MELAMED, CHICAGO MERCANTILE EXCHANGE, TO SENATOR DONALD W. RIEGLE, JR.

1. On October 20, when the CME closed at 12:15 p.m. the reaction of the stock market was dramatic: the Dow rallied 125 points in the next 45 minutes. When the futures markets reopened just after 1:00 p.m., the Dow lost almost 100 points in the next half hour. How do you account for this behavior and what does this say about the relationship of these two markets. To what extent is each dependent upon another?

The stock market experienced severe volatility, and many rapid advances and declines during the week of October 19-23. The price changes that occurred around the emergency CME trading halt on October 20 represented only a small piece of this puzzle, and an analysis of the entire period shows no simple correlation between the activity on various markets and the behavior of stock prices.

To begin with, several of the most significant rallies during this week occurred at times when the futures markets were open and the stock markets were virtually closed because of order imbalances. At the open on both October 20 and October 21, for example, the Dow rallied by 150 to 175 points, despite the fact that most stocks could not trade actively. During these periods, only the futures markets accurately recorded changes in investor sentiment; the stock market simply ratified the new prices when stocks finally did open. In fact, the opening rally on October 20 came to an end and went into a sharp reverse as the stock market began actively trading.

Furthermore, the critical rally on October 20 to which this question refers occurred at a time when there was little trading on the stock market; there have even been allegations that most of the rally took place in the thinly traded MMI contract at the Chicago Board of Trade. Careful analysis by academic researchers have estimated a mean time between trades for an average NYSE stock at around 20 minutes during much of this period, indicating that the stock market was effectively closed.[2] Thus, the 12:15 rally may actually have taken place primarily in a futures market, with the stocks again ratifying the price change as they reopened.

Stock prices did enter a steep decline some 10 to 15 minutes after the S&P futures reopened, although this decline was no different than many others that occurred throughout the crash.

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[2] Lawrence Harris, "Nonsynchronous Trading and the S&P 500 Stock-Futures Basis in October 1987"

The price recovered rapidly during the afternoon, as strong trading resumed in both the stock and futures markets. Again, the strongest price increase occurred during a period of activity, rather than inactivity, in futures.

Finally, it is useful to note that the dramatic price decline that occurred on October 26 -- the second largest in stock market history -- took place on a day when the futures market was extremely inactive, and traded less than half its normal volume.

As a careful analysis demonstrates, the Committee's question vastly oversimplifies the complex market situation of October 20, during which numerous policy decisions were made, and numerous markets opened and closed. We believe that the 12:15 rally probably had far more to do with Federal Reserve efforts to supply liquidity, news of impending corporate stock buybacks, and news that the NYSE would not close, than with actions taken by the CME. We see no overall correlation between activity in futures markets and price movements in stocks.

ANSWERS TO QUESTIONS FOR THE RECORD FROM LEO MELAMED, CHICAGO MERCANTILE EXCHANGE, TO SENATOR ROBERT GRAHAM

1. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th. How much of a role was played as individuals as well as mutual funds themselves started to liquify?

The equity exchanges and the SEC are probably the most logical sources of information on mutual funds since they have better access to data involving mutual funds. However, the following information may be of some assistance. Mutual fund assets experienced extraordinary growth from 1982 to 1987, reaching a level of approximately $800 billion before the market break. Approximately one quarter or $200 billion was invested in equity mutual funds. The total asset value of equity funds fell by $28 billion or 14% between the close of business on October 16, and the close on October 20, 1987. (Most of this change occurred because asset values fell.)

The selling behavior of mutual funds to meet redemptions was not homogeneous. On October 19, three companies allegedly sold $913 million worth of stocks, while the rest of the industry was a net buyer of $134 million.

The following table presents net sales during the market break:

Date	Top 3 Firms Net Sales ($MM's)
October 16	270
October 19	913
October 20	240

Individuals, along with institutional investors, tried to get out of the equity market on October 19, 1987. Approximately 20.1 million individuals owned shares in equity mutual funds during the second quarter of 1987. A survey conducted by the Brady Commission indicated that equity-based mutual fund net redemptions of $779 million occurred on October 19, 1987. Total redemptions after October 19, 1987 averaged $583 million per day for the week of October 21 to 26.

2. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th and 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

Questions about enforcement of the uptick rule must be directed to the NYSE and SEC.

The uptick rule originally served as a defense against manipulation of small stock issues during so-called "bear raids." The rule was never intended to prevent broad declines in market value, and we see no evidence that it could have had any major effect on either the speed, or the ultimate level of the price decline. Short selling has never amounted to more than a small fraction of NYSE volume, and certainly did not contribute a significant fraction of the almost $20 billion of equity sold on the NYSE on October 19.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF
THE CHAIRMAN

March 30, 1988

RESPONSE TO WRITTEN QUESTIONS OF SENATOR PROXMIRE FROM
DAVID S. RUDER

The Honorable William Proxmire
Chairman, Committee on Banking,
Housing, and Urban Affairs
United States Senate
Washington, D.C. 20510

Re: The October Market Break

Dear Chairman Proxmire:

Thank you for your letter, dated February 22, 1988, raising certain additional questions following my testimony before your Committee on February 3, 1988. Many of the questions you raise have been addressed in my February 3rd testimony before the Committee ("February 3rd Testimony), in in the Division of Market Regulation's Report on the October market break ("Report"), and in the Division's March 4, 1988 memorandum ("Memorandum") regarding initiatives being pursued by the self-regulatory organizations in response to the Report. Accordingly, where applicable, the responses to your questions refer to these documents for further discussion.

Let me thank you again for the opportunity to testify before you and the other Committee members concerning the events of last October. Should you have any further questions or concerns regarding the enclosed responses, please do not hesitate to contact me, or Richard G. Ketchum, Director, Division of Market Regulation, at (202) 272-3000.

Sincerely yours,

David S. Ruder

David S. Ruder
Chairman

Q.1. What specific steps do you plan to take to prohibit frontrunning?

Q.2. What specific steps do you think the regulatory agencies, the other self-regulatory organizations and the Congress should take to prohibit frontrunning?

Q.3. How serious a problem is frontrunning?

Frontrunning is a serious trading abuse that can adversely affect the integrity of the markets. The Commission staff has worked with the self-regulatory organizations ("SROs") to prevent the use of options transactions, immediately prior to block-sized transactions in the underlying securities, to unfairly disadvantage options market participants. 1/ Identification of this type of "intermarket" abuse required enhanced surveillance systems at each of the relevant markets (including accurately timed transaction information made available by audit trail 2/ systems) as well as improvements in the sharing of surveillance

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1/ Concerns over frontrunning originated with the development of standardized individual equity options in the 1970s; the subsequent development of options on stock indexes provided new opportunities for frontrunning abuses. The options exchanges have issued circulars to members warning that trading index options prior to substantial stock market transactions which could be expected to affect the index price also would be subject to discipline for frontrunning.

In addition, the term "frontrunning" often is applied to the intra-market trading abuse of "trading ahead," in which a party executes a proprietary trade prior to executing a customer order that would materially affect that market. In some circumstances, this proprietary activity can adversely affect the quality of execution of the customer order. Finally, the SEC Division of Market Regulation ("Division") Report on the October 1987 Market Break (February 1988) ("Report"), at 3-32 to 3-33, also identified instances in which firm proprietary transactions in index futures on the market openings on October 19 and 20, 1987 may have contributed to market conditions that adversely affected the quality of the executions received by the firms' customer stock transactions on those days. Although this activity is not classic frontrunning or trading ahead, it raises significant regulatory concerns. See id.

2/ An "audit trail" is a time-sequenced compilation of trading activity including certain characteristics of this trade (i.e., price, quantity, time, principal/agency designations, and identification of clearing firms and executing brokers) obtained from trade tickets submitted by the executing parties.

information among the SROs. As a result, under the Commission's auspices, audit trail systems have been implemented on all major securities markets, and, in 1981, the SROs formed the Intermarket Surveillance Group ("ISG") to coordinate better surveillance information sharing arrangements. 3/ The Commission staff routinely evaluates the effectiveness of these SRO programs and has found that improvements in intermarket surveillance, coupled with the enforcement effort by the SROs, 4/ have been effective in minimizing this type of trading abuse in the options and equities markets.

It has become evident over the last few years that opportunities now exist for similar trading abuses involving the index futures and securities markets. 5/ In fact, because the price movements in the index futures markets at times can significantly influence stock prices (unlike index options, which by in large react to stock price movements rather than influence stock prices) opportunities exist not only to use index futures to frontrun block stock transactions, but to use stock transactions to frontrun significant index futures transactions. The Commission believes that the securities and futures SROs, under the supervision of the SEC and Commodity Futures Trading Commission ("CFTC"), should accelerate their efforts to: (1) improve the quality of surveillance information; 6/ (2) enhance

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3/ The ISG also plays a pivotal role in coordinating intermarket investigations and improving other aspects of intermarket regulation.

4/ Each of the exchanges has issued circulars to members explaining its policy prohibiting frontrunning as conduct inconsistent with just and equitable principles of trading rules. See, e.g., Philadelphia Stock Exchange ("Phlx") Rule 707. In October 1987 the SROs' circulars on frontrunning were filed with the Commission as rule changes and became effective upon filing. Because frontrunning is prohibited by SRO rules, violations are prosecuted by the SROs, not the SEC.

5/ The Commission has been informed by the Chicago Mercantile Exchange and the Chicago Board of Trade that they believe that their existing rules can be interpreted to prohibit index futures frontrunning.

6/ As discussed above, detection of intermarket trading abuses, such as frontrunning requires the identification of parties to individual trades and the specific times at which trades occurred. For this purpose, all major securities exchanges have developed and use detailed, automated audit trails. In addition, effective October 1, 1986, the CFTC required all futures exchanges to have in place systems designed to intermarket access to this surveillance information through the inclusion of the futures markets in the ISG; (3) develop routine automated programs to "flag" suspicious transactions from this information; and (4) prosecute effectively violations that are identified.

Q.4. A recent Wall Street Journal article dated February 5, 1988 indicated that while there have been frontrunning investigations, at least one got derailed. Without naming institutions, or names, what can you tell us about recent frontrunning investigations and why have none of them resulted in agency action? What is the Commission doing to insure that frontrunning prosecutions are conducted rapidly and completely?

As discussed above, frontrunning abuses in the options markets are addressed as violations of SRO rules of just and equitable principles of trade. Thus, the options exchanges, not the SEC, investigate and prosecute these violations of SRO rules. Once a securities SRO has identified a possible SRO rule violation, the rapid and complete prosecution of the violation is initially the responsibility of that SRO. The Commission received six notifications of final disciplinary actions against member firms for frontrunning abuses during the past two years. Under the Exchange Act, the Commission has the authority to sanction an SRO that fails to enforce its rules or the securities laws. *See* Section 19(h) of the Exchange Act. The Commission staff routinely evaluates the SROs' surveillance, investigatory, and enforcement programs to ensure that violations such as frontrunning are aggressively pursued. It is our understanding that the CFTC has a similar oversight program for its SROs. Suspicious firm activity on an expiration of stock index futures and options and equity options (a so-called "Triple Witching Friday") was identified by SRO, SEC, and CFTC staff. The SEC and CFTC staffs jointly collected and analyzed detailed trading records. Given the above regulatory framework, issues of possible index futures/stock frontrunning were referred by the SEC to the CFTC for consideration by the futures SROs, while issues involving executions of customer stock orders were referred by the SEC to the NYSE.

Given this regulatory framework, any incidents of questionable transactions involving index futures prior to sizeable stock transactions identified by the SEC staff would be referred to the CFTC for consideration by the futures exchanges.

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capture trade data for all transactions effected on their floors within one minute of execution. Audit trails permit reconstruction of trading in an accurate and timely manner, thereby facilitating surveillance.

Q.5. A major source of complaints during the October market turmoil was the opening pricing procedures of various exchanges [e.g., the Chicago Board Options Exchange ("CBOE") and the New York Stock Exchange ("NYSE")]. How are opening prices determined at the various exchanges and what changes, if any, would you recommend?

On the primary stock exchanges, it is the responsibility of the specialist to establish the opening price. The opening price must reflect an accurate assessment of the market for the stock at that time, including pre-opening buy and sell interest and the closing price from the previous day. On the NYSE, if a large imbalance between buy and sell orders would result in the stock opening at a price substantially different from the previous close (a "gap" opening), the specialist must obtain prior approval from a Floor Official. With the advice and approval of the Floor Official, the NYSE specialist also may choose to delay the opening of the stock. Prior to or during the delay, the specialist will issue quote indications in an attempt to reduce order imbalances and find a stable price at which the stock can open. On the American Stock Exchange ("Amex"), the role of the specialist in opening procedures is much the same as that of the NYSE specialist and, as on the NYSE, the Amex specialist must obtain Floor Official approval for a gap opening. The Commission has not recommended changes to these opening procedures. In the Report, however, the staff recommended that the Amex and NYSE review the appropriateness of all gap openings and delayed openings on October 19 and 20. The Amex also is considering changes that would require approval by an exchange official or Floor Governor for gap openings and require all specialists to prepare a form, which is currently optional, indicating the pre-halt condition of the specialist's book prior to any halt in trading. In addition, both the Amex and NYSE have conducted investigations regarding specialist performance during the October market break. As a result of those investigations, the NYSE has reallocated a total of five stocks from four different specialist units. Similarly, the Amex presently has reallocated two stocks from two different specialist units.

The opening prices or "premiums" of all option contracts are established by competitive buying and selling pressure on the trading floor of each exchange. The prices established are based on a number of factors, including the value of the underlying stock (for equity options) or index (for index options), time to contract expiration, interest rates, anticipated dividends, supply and demand, and the volatility of the underlying stock or index.

The leading index options generally are opened by means of "trading rotations," which consist of calling for bids and offers for each series traded. No trading in a series can take place until it has been reached in the rotation. Once the rotation is completed, free trading (i.e., open trading in all option series based on supply and demand for a particular series) begins. Equity options also can involve trading rotations, although usually such rotations are of brief duration. An equity option may not open for trading until there has been an opening transaction in the underlying security on the principal exchange where it is traded. Index options, however, may commence opening rotations, beginning at 9:30 a.m. (Eastern Time), regardless of conditions in the underlying markets.

During the market break, all option exchanges experienced delayed opening rotations as a result of delayed openings or trading halts in the markets for the underlying securities, or because of pricing problems experienced by disseminators of options pricing information. While some of these delays may have been lengthened unnecessarily by problems in communicating information between the stock and options markets, the Commission does not believe that any changes are needed in the opening pricing procedures employed for equity options.

Regarding the procedures for index options, however, the Commission believes that several changes should be considered. The Staff Report found that the length of certain opening rotations [most particularly those occurring on October 20 in the Standard & Poor's 100 ("OEX") index option] contributed to pricing abberations. Because of these problems, the Report recommended that the options markets study possible means to speed opening rotations particularly in index options. The Report also suggested that stock index options not open until most of the component securities are trading to avoid pricing aberrations.

As was reported to you in the March 4, 1988, memorandum from the Division, the CBOE already has taken steps to reduce the length of trading rotations in its index options. The Commission and the exchanges also are reexamining the exchange rules, described above, that permit index options to commence opening rotations at the same time as the opening of the stock exchanges, and continue trading for a time even when a significant percentage of the underlying component securities are not trading.

Q.6. According to the Brady Report, on Tuesday, October 20, when the equity market was again in a freefall, a series of buyback programs by major corporations was announced. To what extent, if at all, were these buyback programs coordinated in order to avoid a complete market collapse and if they were not coordinated in any manner, how do you explain the rapid series of announcements on October 20?

The staff has no information that buyback announcements on October 20 (or any other date) were coordinated, although a number of broker-dealers were actively soliciting corporations to commence repurchase programs. During the critical period on October 20 (11 a.m. to 1 p.m.), eight S&P 500 companies announced repurchase programs. During the entire day on October 20, 31 S&P 500 companies made repurchase program announcements, and during the week of October 19-23, 78 repurchase program announcements were made by S&P 500 companies. See Staff Report at 6-4 and 6-9 (note 8). (It should be noted that many non-S&P 500 companies made repurchase program announcements during the week, but the staff did not include those companies in its analysis).

The Division believes that the repurchases were made for legitimate business purposes based generally on the perception that the issuers' securities had become substantially undervalued during that period.

Q.7. It has been alleged that some in the investment banking community encouraged their corporate clients to buyback their stock and then prior to the actual buyback profited from this advance information. To what extent, if at all, did this frontrunning occur?

The staff has no information that suggests the occurrence of frontrunning related to corporate buyback announcements. We note that, while buyback announcements appeared to have had a positive short-term effect on price performance, the results have a lower statistical significance than the impact of issuer repurchases on stock price performance. Compare Report Table 6-3(A) with Table 6-4. Therefore, it is not clear that the market conditions during the week of October 19 afforded sufficiently predictable positive price effects from buyback announcements to create a frontrunning "opportunity."

Q.8. On October 20, when the Chicago Mercantile Exchange closed at 12:15 p.m., the reaction of the stock market was dramatic: the Dow rallied 125 points in the next 45 minutes. When the futures markets reopened just after 1:00 p.m., the Dow lost almost 100 points in the next half hour. How do you account for this behavior and what does this say about the relationship of these two markets? To what extent is each dependent upon the other?

On October 20 both the futures and stock markets experienced several price surges and reversals. Prices on both markets opened sharply higher, but began to decline between 10:00 - 10:30 a.m., with the DJIA falling by 227 points by 12:21 p.m. By this time market making capacity on the NYSE had become severely strained, and trading halts had been called in 167 NYSE stocks because of large order imbalances. The CME halted trading in its SPZ futures contract at 12:30 p.m. (Eastern Time). As you note in your question, the DJIA rallied at this time, recovering 126.2 points by 1:12 p.m. The rally on the NYSE faded, however, approximately concurrent with the re-opening of the CME at 1:05; over the next 27 minutes the DJIA lost 80 points. The DJIA staged another rally shortly after 2:00 p.m., climbing almost 170 points. It then declined about 80 points, closing up for the day by 102.27 points.

It appears that the see-saw nature of pricing on October 20 is accounted for by several factors. The halt of the major stock index futures contract from 12:30 to 1:05 p.m. eliminated the "billboard effect" resulting from substantial futures price discounts and may have allowed specialists on the NYSE to put out quotes or pre-opening indications without the threat of further selling pressure responding to those discounts.

As was clearly demonstrated by the market break, price movements in the futures and stock markets are closely related, so much so that it is unlikely that, absent a decoupling of the markets, one market could experience a recovery while the other was in a decline.

Q.9. Why wasn't block trading data available during the study, and what effect did block traders have on the markets and small investors on October 19 and 20?

The Presidential Task Force on Market Mechanisms ("Brady Task Force"), did not have time to obtain and analyze block trading data. The Division obtained data on the trading activity of block desks and evaluated the impact of such trading on October 19 and 20. The Division received figures on proprietary purchases and sales, and also interviewed a number of prominent NYSE block traders. Further, the Division cross-checked its data with information on upstairs firm proprietary activity submitted to the NYSE. As detailed in Chapter 4 of the Staff Report, the data revealed that upstairs firms were net sellers on October 19 and 20 of 4.6 and 9.6 million shares, respectively, and, therefore, provided little or no buying support to the market on these days. The Division concluded that block activity declined during the market break, and the loss of that additional source of liquidity further exacerbated the volatility of the market by putting increased selling pressure on specialists.

Q.10. The recordkeeping system of the futures markets has been praised as vastly superior to that of the equities markets. What specific steps are you taking to improve the information systems in the equities markets? What information systems should be established to monitor transactions and conditions in related markets?

Q.11. The ability to analyze financial market performance depends upon the ability to reconstruct trade activity and determine who traded what with whom, when and at what price. The Brady Task Force report agrees with this fundamental point and, furthermore, that the futures markets are able to reconstruct trade activity while the securities markets are not. (Brady at 67.) We have been told that the Chicago Board of Trade has offered its assistance to the NYSE and AMEX to use the CBOT's "CRT-Plus" audit trail to assist those securities markets in improving their ability to reconstruct trades. What is the SEC doing to remedy the inability of the securities markets to rapidly and accurately reconstruct trade data?

The Brady Task Force does not criticize the "audit trail" systems of the securities markets as in any way inferior to audit trails in the futures markets. Rather, the Brady Task Force indicated that its ability to reconstruct trading activity in the securities markets was hindered by the absence of readily available customer information. The SEC inspections staff routinely evaluates the effectiveness of securities SRO surveillance, investigatory and enforcement programs; these evaluations include the quality of the surveillance systems' audit trail data. Overall, the Commission's inspection program has found that the SROs are diligently continuing to improve the quality of their audit trail data to enhance the effectiveness of the SRO surveillance systems. It is our understanding that the CFTC has a similar inspections program for the futures SRO audit trail systems. 7/

It also is our understanding that neither securities nor futures audit trail systems identify customers. Rather, the Brady Task Force was referring to "clearing house" and "large trader" information systems that have been created in both the index futures and options markets, largely to monitor for credit risk and compliance with position limits for individual and "aggregated" accounts. Because there are no comparable position limits in equities, specialized monitoring systems have not developed in the stock markets. The SEC's Division of Market Regulation agrees with the Brady Task Force that comparable systems should be developed for the stock market. 8/

In this regard, the different backgrounds of futures and securities "recordkeeping" are significant. Traditionally, the futures markets, particularly their affiliated clearing houses, have sought information on day-to-day position changes in clearing member and customer accounts. These systems allow them to identify rapidly net position changes. Recently, the futures markets have undertaken to identify the sequence of trading on their floors. In contrast, the securities markets have focused

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7/ In addition, it should be noted that while the index futures audit trails track only a few contracts, the NYSE audit trail tracks over 1,500 securities.

8/ *See* Staff Report at 3-27.

on the ability to reconstruct the sequence of trading on their floors, and, where suspicious trading is identified, request specific information on customer position changes. Thus, on a transaction-by-transaction basis, the securities markets have developed excellent audit trail capabilities. Nevertheless, the October experience demonstrates the need to be able to identify rapidly significant position changes of customers in stock holdings. For this reason, in the February 3rd testimony, the Commission recommended the creation of large trader reporting requirements.

Q.12. What specific steps should be taken immediately to better coordinate international securities market mechanisms?

In response to the increasing inter-relationship of the world's securities markets, the Commission has for some time sought greater cooperation and coordination with foreign securities regulators. This has included negotiating bilateral enforcement agreements and participating in multilateral forums such as the International Organization of Securities Commissions ("IOSCO") and the Organization for Economic Co-operation and Development ("OECD").

Since my February 3, 1988 testimony, I have travelled to Japan and England and have met with securities regulators in those countries. We agreed, at those meetings, on the importance of maintaining direct access and communication with each other during periods of volatility in the securities markets. In addition, Commissioner Cox and members of the staff have attended IOSCO and OECD meetings in Europe to convey the Commission's interest in developing worldwide capital adequacy standards and reciprocal arrangements to assist in enforcement investigations.

The Commission and its staff will continue to work to develop trading, and clearance and settlement linkages; international trade and quote mechanisms; improved financial oversight systems; and effective enforcement and surveillance arrangements.

Q.13. A number of people have suggested that the exchanges and the Commission have done a poor job of regulating the specialist system and that better performance and capital standards should be established. What is your response and how much of a specialist's profitability should go toward increasing its capital? What specific modifications to the specialist system has the SEC considered and what is the state of its review?

The NYSE and Amex routinely monitor trading by specialists to ensure that fair and orderly markets in specialty stocks are maintained and investor orders are properly executed. 9/ This monitoring includes automated surveillance programs, staff reviews of trading situations requiring floor official approval (e.g., stop order elections, gap openings), and inquiries into complaints by investors, issuers, member firms, and others. Troublesome situations are investigated, and, if warranted, referred for formal discipline by the Exchange and consideration in the stock allocation process. The Commission's inspections staff routinely evaluates the effectiveness of this program and recommends means of enhancing its effectiveness. In addition to these inspections, the Commission staff coordinates with the NYSE and Amex reviews of investor complaints received by us regarding specialist operations. The Commission staff also reviews specialist market-making performance as part of studies of unusual market volatility such as the study of the October market break. Finally, the Commission reviews various rule change proposals pursuant to Section 19(b) of the Securities Exchange Act of 1934, including all rule changes regarding specialist activity.

In light of the wide disparity in NYSE specialist performance during the market break period, the Commission is currently considering several modifications to the NYSE specialist monitoring system. The staff is in the process of reviewing a proposal by the NYSE to add specific objective standards to measure specialist performance in a variety of areas. Further, the Commission, in the February 3rd testimony, and in the Report, recommended that the NYSE develop relative standards to evaluate specialist performance. The NYSE has, in the past, been reluctant to adopt relative performance measures so that specialists who were regularly among the lowest ranked specialists would be subject to performance reviews. In response to the Division's request, however, the NYSE has agreed to review the feasibility and desirability of developing relative measures of performance. Finally, the SROs have been responsive to the Division's recommendations that the SROs more actively use their disciplinary and/or reallocation powers to remedy poor specialist performance during the market break. To date, the NYSE has reallocated six stocks from five specialist units (one of the six stocks was not reallocated due to poor performance in that stock, but to replace poor performance in another stock, E.F. Hutton, which no longer will be listed on the Exchange due to its merger with another company); and the Amex is investigating inadequate performance in 70 stocks including 16 specialist units, and recently has reallocated two stocks. Moreover, the regional stock exchanges have planned discussions to evaluate means to improve regional specialist performance during periods of high volatility or volume.

9/ The regional stock exchanges also conduct surveillance on equity trading on their floors.

In addition, since the study was released, the NYSE has implemented the use of two new capital reporting forms, one for self-clearing specialists and one for introducing specialists. The information required by the forms must be submitted daily to the exchange by 9:00 a.m. on the day after the trade date. The reports should allow the exchange to be alerted to any potential or actual financial difficulty of a specialist, and will allow the exchange more time to take action when it appears that a specialist lacks the financial resources to maintain a fair and orderly market.

The Amex currently is modifying its specialist surveillance system to require firms with clearing specialist accounts to provide on a daily basis standardized account information for the specialists. For specialists who are dual members (Amex members who are also members of one or more exchanges), this information will include account statements, or summaries thereof, of the dual members' trading activities on other exchanges where they are members. The Amex also will require daily information from self-clearing specialists who are currently subject to a monthly reporting requirement. Furthermore, for times when closer monitoring is necessary, the Amex is working toward having the capacity to dispatch examiners to review specialists' books and records, on a daily basis if needed, to obtain information not otherwise available.

Q.14. Did specialists on the NYSE trade in stock index futures on October 19 and/or in the period immediately following the crash? If so, to what extent.

We understand that NYSE specialists do not frequently trade index futures. During the market break, one firm did sell 85 futures contracts based on the NYSE Average and another firm bought and sold 120 S&P 500 futures contracts.

Q.15. The uptick rule basically prohibits short-selling unless the last change in a stock's price was an increase. Is there any equivalent cushion against downward volatility in the futures market? Should there be? If not, why not? Is the uptick rule still a viable market mechanism in today's environment and what is the Commission doing about reports of possible violations of the rule?

The uptick rule, Rule 10a-1, was designed to accomplish three objectives: (1) to allow relatively unrestricted short selling in advancing markets; (2) to prevent short selling at successively lower prices, thus eliminating short-selling as a tool for driving a market down; and (3) to prevent short sellers from accelerating a declining market by exhausting all remaining bids at one price level, causing successively lower prices to be established by long sellers. In an advancing market, short selling serves to counter unrealistic bullish sentiment and provide purchasing power in subsequent market declines. Accordingly, the rule permits relatively unfettered short selling under such conditions. The rule is principally intended to prevent the creation or acceleration through short selling of a downward trend in a particular security's price to profit from the price decline -- a manipulative practice illustrated by the infamous "bear raids" of the 1920s.

As the Report discusses, the advent of derivative products has enabled market participants to effect transactions that are functionally equivalent to the short selling of stock, and the effects of such sales may be transmitted to the equity market. Nevertheless, the Commission believes that an uptick rule analogous to that applicable to exchange-listed equities would not be feasible in the futures (or options) markets. The entire open interest (contracts outstanding) in the futures and options market is represented by a buyer who is long and a seller who has sold short. Accordingly, liquidity would be severely restricted by an uptick rule. Additionally, index futures or options respond to downward moves in the cash index by adjusting downward. This is quite different from the case with individual securities where short selling, rather than responding to market declines, could be used to create or accelerate a decline. Restricting a futures or options trader from selling short on a minus tick when he is merely reacting to a price decline in the cash index would impose unacceptable risks upon the trader.

While certain derivative products (e.g., options on individual stocks) may have a manipulative potential, use of such derivative products would be an inefficient and costly method to manipulate the underlying security. Trading in options or futures on indexes of course would be an even more inefficient means of manipulating a particular stock or a basket of stocks. Therefore, the uptick rule appears to continue to serve an anti-manipulative purpose, and may ameliorate somewhat selling pressure during a market break. The Commission staff has recently increased its efforts to monitor compliance with the short sale rule.

Q.16: According to a number of commentators, one of the main problems surrounding the events of October 19 and 20 is the cash settlement feature of index futures and options. These people argue that cash settlement creates a liquidity imbalance in the marketplace by allowing one group of players to exit the game without paying all their dues. What is your response to suggestions that cash settlement of index vehicles be replaced with settlement in kind?

The Report indicated concern that the leverage associated with derivative stock index products often gives rise to severe stock market volatility. The Report stated that this leverage derives from two aspects of derivative index products: low margin requirements and cash settlement. In particular, the availability of cash settlement eliminates the risk that market participants must liquidate positions prior to expiration of index options or futures or accept delivery (and make payment for) baskets of stocks. The absence of this risk may increase the willingness of market participants to take on larger positions and move out of those positions sooner than they would if physical settlement were required.

Requiring physical delivery would raise practical problems. For example, physical settlement would be unwieldy and expensive for public investors with small positions. In addition, physical settlement would impose very high costs on options writers who, unlike futures holders, would be subject to exercise (and would be required to take or provide delivery) at any time. Despite these concerns, as stated in my February 3rd testimony, the Commission will continue to review the feasibility and desirability of physical settlement of stock index options and futures. At the same time, as also stated in my February 3rd testimony, the Commission advocates a less disruptive way to alleviate the leverage concerns associated with derivative index products, i.e., margin increases for stock index futures and options.

Q.17. What is your response to the GAO report which faults the Commission for paying inadequate attention to the NYSE's computer operations and lacking the capacity to perform sophisticated reviews of computer systems?

It is not clear how the GAO came to its conclusion that the SEC "needs to assess its oversight role and capabilities for evaluating automated systems." The GAO's review of the performance of automated systems was limited to a recitation of problems already identified by the NYSE through its own internal audit procedures. (Unlike the Division's Report in Chapter 7, the GAO did not review other exchange systems.) Indeed, in view of the extraordinary increase in volume in October, we believe that it is notable that there were no major systems failures for a protracted period of time. For example, over 324 million shares and over 471 thousand transactions were processed through the NYSE's DOT system on October 19, more than doubling previous records. Moreover, the NYSE has taken immediate steps, as described in the March 4 memorandum, to improve that system and others.

Furthermore, the GAO study, in noting that the ticker tape was delayed for up to 2 hours on October 19 and 20 and that "[t]he impact of this delay was that the tape for last sale information was stale and outdated," 10/ failed to explain that

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10/ GAO Study at p. 75.

the ticker tape is a secondary, and relatively unimportant, source of last sale information. Current last sale information was available by way of the Securities Information Automation Corporation's high speed line through information vendors' (such as Quotron and ADP) retrieval devices.

The Commission has had a longstanding interest in ensuring that the exchanges and the National Association of Securities Dealers ("NASD") maintain sufficient operational capacity. To this end, the Commission staff have in the past monitored, and continue now to monitor the development by the exchanges and the NASD of automated routing, execution, and trade reporting systems. As the GAO study explains, the SEC reviews proposed rule changes relating to these systems, conducts on-site inspections of exchange facilities, and meets with exchange and NASD officials to discuss systems improvements. We believe that the exchanges and the NASD are in the best position to perform "sophisticated reviews of computer systems." If the GAO believes that the Commission should engage in a complete review of all of these systems, including software and hardware upgrades, the Commission must disagree. We believe that such a review would not be a good allocation of the Commission's resources. As stated in my February 3rd testimony and in Chapter 7 of the Report, the Commission will continue to insist that SROs be prepared for sustained periods of high volume.

Q.18. In 1975 Congress directed the SEC to create a national market system. What is your vision of what a national market system should look like and what further improvements do you think should be made to get us there?

Congress neither defined the term "national market system" nor mandated specified minimum components of such a system. It did, however, delineate in Section 11A of the Securities Exchange Act of 1934, the goals and objectives that it sought to achieve. These include: the economically efficient execution of transactions; fair competition; fostering the widespread availability of quotation and transaction information; the best execution of investors' orders; and the possibility for investors' orders to be executed without the participation of a dealer. In addition, Congress found that the linking of markets would promote many of the objectives of a national market system as well as increased automation.

The Commission has overseen many changes directed toward facilitating a national market system. In particular, it has designated most exchange-listed securities and many over-the-counter issues as National Market System Securities, and has mandated quote and trade reporting for these securities. Comprehensive, consolidated, real-time transaction and quotation reporting and dissemination systems have developed. These systems ensure the widespread availability of market information, promote the best execution of investors' orders, and encourage competition among brokers and dealers and among exchanges. The creation of the Intermarket Trading System ("ITS") has helped to link the nation's equity markets. Barriers to competition also have been reduced by the abrogation on a prospective basis of all off-board trading restrictions, and by the Commission's granting unlisted trading privileges in over-the-counter securities.

The Commission will continue to promote the expansion and improvement of these initiatives, and will be alert for additional initiatives which might promote competition and enhancements for protection in the securities markets.

Q.19. Section 11A(a)(1)(C) of the Securities Reform Act of 1975 reads in part, as follows:

> "It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure --
>
> (iii) the availability to brokers, dealers and investors of information with respect to quotations for and transactions in securities;
>
> (v) an opportunity . . . for investors' orders to be executed without the intervention of a dealer."

What steps has the Commission taken to implement this Section of the law, and cannot regulations be made that require that: (a) equal, real-time information on all bids and offers entered into exchange and non-exchange markets be made available to all investors and broker/dealers; and (b) all bids and offers, including those of investors, be permitted to interact under an equitable market operation rule, such as time/price priority for all bids and offers? If not, why not?

(a) Since the 1975 legislation, comprehensive quotation and transaction reporting systems have been developed. These systems provide investors and broker-dealers access to real-time transaction and quotation information from all equity markets and broker-dealers participating in the National Association of Securities Dealers Automated Quotation System ("NASDAQ").

(b) An automated system with strict time and price priority already exists. Specifically, the Cincinnati Stock Exchange, with the Commission's encouragement, developed the National Securities Trading System ("NSTS") which became operational in 1978. (A similar system is also operated by Instinet Corporation.) This system is linked with other trading markets through the ITS. Nevertheless, the NSTS has not attracted substantial professional or public investor participation.

The issue, therefore, would appear to be whether the Commission should require usage of such a system. In the 1970s, after Congress mandated a national market system, the Commission considered proposals to create an electronic market system in which all orders, whether from public investors or from market makers, would be executed automatically on the basis of strict price and time priority. The Commission recognized that, in theory at least, such a system could lead to substantial efficiencies in securities trading. It also was clear, however, that such a system could have had a profound destabilizing impact on existing market institutions. Such a system would be impossibly cumbersome, forcing brokers to route orders to other markets to receive an identical execution because the quote was first in time unless it was fully automated, yet the shift to such a fully automated system appeared likely to eliminate face-to-face trading and force all market makers into an automatic execution environment that arguably imposed substantially increased risks. Proposals for such a system produced strong negative commentary from securities industry members. Moreover, with the advent of derivative markets, it is unclear how best to require that automated systems be developed unless comparable changes were made in the derivative markets.

Indeed, it is important to evaluate the open outcry systems used in today's derivative marketplaces before any attempts at mandated automation are considered. On October 19, for example, compare the DJIA's closing value of 1,738 points on the NYSE, reflecting the specialists' attempts to counter the market's free-fall during the last hour of trading, to the price predictions for comparable DJIA value in the futures markets -- 1,400 points, and the options markets -- 880 points (October 20). Until the quality of the futures and options pricing mechanisms can be more consistent with the stock markets, and investor confidence in derivative markets resurrected, it would be premature for Congress to mandate total market automation.

Accordingly, in view of the availability of a private sector alternative, it does not appear necessary to require such a radical restructuring of the nation's securities markets. Instead, it is more appropriate to ensure that there are no barriers to the creation of such systems and their use if the securities industry finds them preferable to existing trading mechanisms. Nevertheless, the Commission continues to encourage enhanced automation. For example, the Report recommended that ITS participants consider developing "default procedures" (*see* Report p. 7-48) to enhance trading executions, and my February 3rd testimony contained Commission recommendations for increasing the capacity of the NYSE's automated order routing system.

Q.20. Some have suggested that under an open system of total order interaction, with the market making function permitted to be performed by any investor as well as by broker/dealers, that there would be no need for trading halts or "circuit breakers." They reason that trading would halt any time there were no bids and offers in the marketplace priced so they could interact. Under such a system, trading halts would be caused by competitive market forces, rather than by regulation. Why wouldn't such a system be preferable to one in which regulators, market self-regulators or market makers determine the need for trading halts?

Section 2 of the Securities Exchange Act expresses the goals of avoiding "excessive speculation" and "sudden and unreasonable fluctuations in the prices of securities." Section 11A(a)(1)(C) also suggests that fair and orderly markets are an important goal of the federal securities laws. Specialists on securities exchanges and market makers in the over-the-counter market play a central role in ensuring fair and orderly markets. The current system also promotes continuous trading and fair pricing, and provides investor protection safeguards. In an "open system," in which specialists and market makers would not have these responsibilities, and in which trading would halt whenever bids and offers were not priced to interact, disorderly markets would result and liquidity likely would be impaired. It is difficult to believe that public investors would be advantaged by a system in which their orders might wait hours for a contra public order before being executed.

It is also important to recognize that there are two distinct and separate situations in which trading halts may be desirable. One is the situation described in your question, in which there is an absence of buyers in the market and trading is halted to allow a new equilibrium price to be established. In the second situation, trading is halted to allow news to be released and disseminated in the market. The "open system" described in the question would not obviate the need for calling a trading halt in the second scenario. While the "open system" would provide "natural" trading halts where there is an absence of buyers, such a system also would destroy many of the valuable attributes of the current systems for trading securities.

Q.21. What regulatory or technical objections would there be, if any, to a fully automated electronic auction system with price/time priority for the trading of securities and their derivatives? Why would not such a system be preferable to existing auditory floor and telephone trading systems?

This question appears to contemplate an automated system allowing equal access to all broker-dealers, with the elimination of the trading crowds on stock, options, and futures exchanges. As indicated in the response to Question 19, the replacement of existing trading mechanisms with a fully automated electronic auction system would have profound implications, including, perhaps, the obsolescence of securities and futures exchanges. It is clear that such a system would raise many questions relating to, for example, access, oversight, liquidity, and the maintenance of fair and orderly markets. It is difficult, however, to foresee, and to provide against, the many issues and problems that might arise. In sum, the government should not require the elimination of trading floors. Rather, the Commission's role should be to ensure that no barriers exist to the development of innovative trading systems which can enhance the overall efficiency and liquidity of the securities markets.

Q.22: Should the small order market be given preference in fast markets through emergency procedures and facilities designed to guarantee insulation from the congestion of institutional panics?

The Brady Task Force recommended that consideration should be given to favoring public customers in execution over institutional and other proprietary orders through the NYSE's DOT system when there are serious order imbalances. The Commission's recommendation contained in my February 3rd testimony that the SROs should expand the operational capacity of their small order routing and execution systems to accommodate volume surges, should ensure that small orders can be executed swiftly during periods of heavy volume. The SROs have made substantial progress in increasing order routing and execution capabilities and are continuing to upgrade their systems, as noted in the Division's March 4 memorandum. This increased capacity will benefit the execution of small orders during times of heavy volume.

Q.23. The Brady Report observes that three portfolio insurers alone accounted for sales of $2.8 billion in index futures and $2 billion in stocks. It also notes that three mutual fund groups accounted for $900 million in stock sales. So, out of thousands of institutional players, a mere handful set the stage for the greatest fall in history. What issues does such unbridled concentration of market power raise and how should they be addressed?

As stated in the February 3rd testimony, the trading strategies employed by large institutions can, at times, exceed the temporary liquidity capacity of the futures or stock exchanges. There are several suggestions in both the Report and the February 3rd testimony that are designed to address this concern. For example, the Commission has recommended that margins be increased temporarily for stock index futures products to reduce their excessive leverage, and that a post to trade a basket of stocks be added to stock exchange floors to draw away from individual stocks the pressures created by institutional program trading.

Q.24. According to the Brady Task Force just 3 buyers accounted for more than one-third of the trading in a stock-index futures contract, the Major Market Index, during its mysterious October 20 rally. On the other hand, the CFTC has reported that trading at that time "tended to be dispersed among numerous traders, with no evidence of concentrated buying" the day after Black Monday. Was or wasn't there concerted buying at the time the market rallied on October 20? What caused the market to rally just before the NYSE was about to close on October 20? What is your explanation for why the stock market rallied after the Chicago Mercantile Exchange closed temporarily on October 20 and then dropped after the Mercantile Exchange re-opened?

The Division's review of MMI futures trading on October 20 found no evidence to support allegations of price manipulation. This conclusion is consistent with the findings of both the CFTC and the Brady Task Force.

Both the CFTC and the Brady Task Force identified and examined those Chicago Board of Trade ("CBT") clearing firms which were the largest buyers during the period from 12:18 p.m. to 12:50 p.m. when the MMI rose an unprecedented 80 points. Three CBT member firms accounted for more than one-third of total volume during this period. However, neither study found evidence that the trades by these firms were made either in concert or with a manipulative intent. Rather, these trades were consistent with other proprietary and customer trading activity executed by these firms throughout the day. In addition, other than these three CBT clearing member firms, no other firms were identified as being significant purchasers of MMI futures. As noted in the study by the CFTC, most of the buying was widely dispersed, consisting of small lot transactions between CBT floor traders, and none of the available evidence indicated that these floor traders were acting in concert to manipulate the market.

In addition, the Division's review of index-related trading on the NYSE during this period found no evidence of one of the essential elements of the manipulative scenario which had been raised by some market commentators. Specifically, according to this scenario, concentrated buying in the MMI futures could have been used to create a premium to the prices of the index component stocks which, in turn, would result in massive arbitrage programs buying stocks and driving up stock prices. Although the November MMI futures contract rose from a steep discount to a 3 to 4 point premium, the Division's analysis of trading by the most active firms identified only one index arbitrage program, consisting of the purchase of only 40,000 shares of stock and the sale of 25 MMI futures, which was executed during this period. While the potential impact on market psychology of a premium in the MMI and the effect of extreme illiquidity in the market during that critical period should not be minimized, the information presently available to the Division does not appear to support the proposition that manipulation of the MMI futures led to the market turnaround on October 20. Instead, the Brady Task Force and the Division have noted a number of more reasonable factors which may have played roles in the market recovery on the 20th. These factors include: (1) reassurances by the Federal Reserve Board of sources of additional liquidity for broker-dealers, including NYSE specialists; (2) announcements of significant issuer stock buy-back programs; and (3) value-driven buying by institutional investors of underpriced securities. It may not be possible for any market reconstruction to establish a definitive "cause" for the October 20 market recovery.

We have separately discussed in Question 8, the question of the closing and reopening of the Chicago Mercantile Exchange S&P 500 future.

Q.25. The Brady Report highlights the fact that on October 19 and 20 the stock and futures markets "disconnected." What steps should be taken to avoid such disconnections in the future?

During October 19, there were periods when delays in the NYSE order routing systems effectively precluded index arbitrage activities. In addition, the NYSE requested that its order routing system not be used for index arbitrage for much of the week of October 19. While such restrictions are not desirable under normal conditions, on October 19 and 20, stock index futures often traded at huge discounts to the stock market. Arguments can be made that, had additional index arbitrage taken place during these periods, the sell pressure on the stock market could have caused stock prices to fall even further than they did. In normal times, however, index arbitrage serves a useful function by promoting accurate prices, thereby enhancing efficiency and the viability of strategies that rely on such pricing relationships, and the February 3rd testimony recommended increasing DOT's capacity so that technical limitations do not encumber such arbitrage.

Furthermore, the Commission, the CFTC, and the various stock and futures exchanges are working to enhance intermarket cooperation by considering better coordination of trading halts and market openings and closings. These and other measures are described in the Division's memorandum attached to my March 4, 1988 letter to you.

Q.26. Do you believe that the net worth of floor traders and specialists should be increased to boost liquidity, and that Wall Street's investments in electronic surveillance systems hasn't kept pace with the growth of trading?

The Report revealed that the capital of the equity specialists can become severely reduced during a major market break. While the capital of specialists appears to be sufficient under normal trading conditions, it may not continue to be sufficient if the markets continue to be substantially more volatile. In the Report, the Division expressed its concerns that the levels of specialist capital currently required by the exchanges do not reflect the actual capital needed to ensure the maintenance of fair and orderly markets in today's conditions of heavier volume and greater volatility. The Division also expressed its concerns about the current systems of monitoring and surveillance of the specialists' capital and positions that the exchanges employ.

As stated in the February 3rd testimony, the Commission believes that the levels of capital that specialists are required to maintain should be increased. Along this line, the Commission staff is currently studying several modifications of the current specialist regulatory scheme.

First, the staff is studying what effects on specialist capital and liquidity the elimination of the exemption from the Commission's Net Capital Rule ("Rule") would have. Since the Rule, which proscribes the capital standards for broker-dealers, is a liquid net worth test, the application should help to provide a cushion of liquid assets in excess of liabilities and potential adverse fluctuations in the market value of securities positions.

Second, the staff is considering suggesting that the exchanges should devise and implement more flexible financial responsibility rules that would better take into account the financial resources required to make markets in the various types of securities (e.g., liquid or illiquid securities).

With regard to increasing the liquidity of options market makers, the Staff is exploring several modifications. As with equity specialists, the Division is currently examining the effect of elimination of application of the Net Capital Rule to all options market makers. The Division is also studying other possible modifications to the Rule such as: (1) the degree to which option market makers must have equity in their accounts with their clearing firms equal to the risks in their positions; (2) charging more capital for short positions; (3) eliminating certain option-related exemptions from the Rule; (4) decreasing the leverage now available to clearing firms with respect to option market markers' positions; and (5) limiting the amount of equity an option market maker may withdraw from its clearing firm.

The major SROs have allocated significant funds to upgrade surveillance systems over the last few years to keep pace with increasing trading volume. For example, the NYSE has implemented a major reconfiguration of its automated surveillance programs to identify suspicious or troublesome trading activity or market movements -- a project called "Stockwatch II." In addition, the NYSE has devoted considerable resources to develop data bases of information on corporate "insiders" for listed securities for

incorporation into automated programs for cross-checking trading records in insider trading investigations -- a program called "Automated Search and Match" ("ASAM"). Similar surveillance systems up-grades have been undertaken by the Amex, CBOE, NASD, and several regional stock exchanges. In addition, the SROs are developing automated programs to facilitate the electronic submission of trading records from member firms -- termed "Electronic Bluesheeting" -- which, in turn, will enable investigators to use computers to manipulate this data to expeditiously reconstruct voluminous trading records. In sum, the securities SROs are allocating resources to enhance surveillance capabilities.

Q.27. The Brady Commission found that, although many specialists performed competently on October 19, other specialist activity was "poor by any standard." Thirteen of the 55 Big Board specialist units exhausted their buying power by the end of October 19, calling into question the level of capital present in the specialist system. Is this an accurate assessment of what happened? What should be done to improve the performance of the specialist?

The Report agreed with the conclusions of the Brady Task Force that specialist performance varied greatly during peak volume periods in October. The Report found that while most specialists performed reasonably in light of the unusual circumstances of October 19, there were several instances of questionable specialist performance. The February 3rd testimony agreed with this finding, and recommended that the NYSE adopt relative specialist performance standards and use its disciplinary and reallocation authority as a response to poor performance. I note that, to date, the NYSE has reallocated five stocks and the Amex two stocks based on poor performance during that period.

While it is true that thirteen of the NYSE's fifty-five specialists exhausted their "buying power" on October 19, there were other indications that demonstrated the need for an examination of specialist capital, such as: (1) by October 19, NYSE specialists were forced to increase their aggregate long positions by at least twice the normal size with some individual specialists increasing the size of their long positions to four times that of the normal size; (2) at the close of trading on October 19, over one-half of the buying power possessed by NYSE specialists was held by only eight units, and twenty-three units had less than $5 million in buying power; (3) an inquiry into the financing arrangements of the smaller specialist firms revealed that many do not maintain established lines of credit; (4) a review of several of the exchanges' specialist financial responsibility requirements revealed that the levels of capital specialists are required to maintain are relatively low with respect to even normal demands on specialists; and (5) a study of the monitoring and surveillance systems of several of the exchanges showed that the systems required improvements in the area of daily positions and daily financial conditions of the specialists.

It should be emphasized that buying power should be viewed only as an indicator of the financial condition of a specialist firm. Buying power, as was explained in the Report, reflects only the capital actually committed to a specialist firm. It does not indicate any additional financing available to some of the specialist firms affiliated with larger broker-dealers or any emergency or stand-by lending arrangements a specialist firm may have. Furthermore, the buying power figures supplied by the NYSE to the Division for its Report were calculated using a straight 25% for both margin requirement and loan value. As the Report pointed out, an exchange member extending credit to an introducing specialist firm is not bound by the exchange's maintenance margin requirements but can extend credit on a "good faith" basis, and a bank lending money to a self-clearing specialist firm may extend credit on a basis greater than 75% of the value of the securities pledged if it wishes.

The amount of capital available to specialist firms could be increased by several methods. Two of these methods currently being studied, as stated in the response to Question 26, would be to eliminate the exemption from the Commission's Net Capital Rule for specialists and to have the exchanges review and modify their specialist financial responsibility requirements to reflect the capital requirements of specialists in today's markets more adequately. Another method, as was outlined in the Report and suggested in the February 3rd testimony, would be to require each specialist to maintain a guaranteed line of credit or to clear its security transactions through a firm with a guaranteed line of credit or to be subject to higher exchange-imposed financial responsibility requirements.

Q.28. Nicholas Katzenbach, in his study for the NYSE, highlighted the fact that different markets have different purposes. (a) What in your opinion are the basic purposes of the markets for stocks, stock index futures and stock options? (b) If markets have different purposes, to what extent should they be regulated differently? (c) What potential problems should the individual investor be aware of in interacting with these various markets?

(a) The basic purposes of the stock market and the stock index futures and options markets are capital investment and risk management, respectively. The stock markets provide a mechanism through which industries raise needed capital and investors attempt to increase their current cash resources through dividends and capital appreciation. Stock index futures and options are used primarily by pension funds, investment banks, and other institutional investors to shift the price risks associated with ownership of stock portfolios from themselves to those who are willing to accept those risks, although they also may be used as alternatives to short term stock trading at lower commission costs and a smaller commitment of capital. Over the past few years, however, institutions increasingly have come to use stock index futures as surrogates for, or in connection with, stock portfolio trading. The changed use of stock index futures is discussed in Chapter 3 of the Report.

(b) Both the Brady Task Force and the Staff Reports concluded that the stock, stock index and stock index futures markets are linked. This finding does not dictate that the regulations governing each individual market should be identical. The Commission recognizes that each market appropriately has its own distinctive products, regulations, procedures, and systems of trading. As the Commission suggested in the February 3rd testimony, however, the speed with which capital moves among these markets and the high degree of pricing correlation among them require that regulations governing each individual market take into account the numerous intricate relationships among the markets and the impact that trading in any one market can have on trading in the others.

(c) Because the stock index futures, stock index options and stock market are so closely linked, price movements in one will impact the other markets. As a result, investors need to understand that institutional investors pursuing intermarket investment strategies, such as index arbitrage and substitution, can affect the velocity and concentration of stock trading and can contribute to increased market volatility. Indeed, because large portfolio traders may choose to enter the futures market first, and because the nature of futures trading allows futures prices to change more rapidly than their corresponding equity prices, futures prices sometimes lead equity prices. Participants in the stock market on a short-term basis should recognize this increased volatility but it need not necessarily affect significantly the customer investing on a long-term basis.

Q.29. Is it true that when sell programs arrived at the exchanges, there were no potential buyers and that even specialists stood aside? What should be the role of the specialist in such a situation?

The Division's review of trading on October 19 and 20 did reveal some instances in which sell programs reached the floor and found little or no buy-side interest. Specialists, however, generally met their responsibility to act as buyers of last resort. Chapter 4, pages 27 to 29 of the Report, discusses the specialist's role in light of program trading. As discussed in more detail in response to Question 33 below, the role of the specialist, in this situation, is to maintain a fair and orderly market and keep general price movements orderly based on supply and demand. The specialist is not expected to stem general price movements for the sake of continuity.

Q.30. This Committee has heard a great deal from several witnesses about the importance of what the Brady Report calls "circuit breakers" or other market mechanisms to break a market in free fall. The futures exchanges have imposed rather narrow price limits on stock index futures contracts to implement circuit breakers. Those limits will prevent the futures markets from dropping more than 100-200 Dow points in one day. While the NYSE has made several proposals, it continues its existing discretionary trading halt approach to circuit breakers. The Brady Task Force emphasized the necessity of rationalizing and coordinating the different forms of circuit breakers in place across the different markets. (Brady at 66.) What is the SEC doing to insure that these various circuit breaking mechanisms are closely coordinated so that the markets do not disconnect?

The Commission has commenced steps to ensure coordination of relevant federal agencies during a market emergency. As a result of meetings between myself, the Chairmen of the CFTC, and the Board of Governors of the Federal Reserve Board, senior staff members of these three agencies are undertaking the task of developing a comprehensive interagency contingency plan that will include, among other items, the coordination of the various circuit breaking mechanisms among the different markets. Likewise, on several occasions the exchanges, including the equity, options and futures markets, have met to discuss various issues relating to inter-market coordination and sharing of information. These meetings have included discussions regarding the various circuit breaking mechanisms and coordination of such mechanisms between the equity and derivative markets. The most recent meeting occurred on March 16 and included all the marketplaces, the Commission and the CFTC. Finally, the Division is currently reviewing a proposal by the NYSE for a six-month pilot that would prohibit members from entering into any of the NYSE's automated order routing or trading systems index arbitrage-related stock transactions on days when the DJIA moves 50 or more points from the previous day's close (File No. SR-NYSE-88-02). In its review of the proposal, I expect that the Commission will consider means to coordinate such a circuit breaking mechanism on the NYSE with the other exchanges, particularly the derivative markets.

The issue of developing a market-coordinated circuit breaker mechanism also will be addressed, I believe, by the Working Group on Financial markets, a group called into existence on March 18, 1988 by Executive Order. This Group has been directed to identify and consider: (1) the major issues raised by the numerous studies on the market break, (2) those recommendations of the studies that will enhance the integrity and orderliness of our nation's financial markets, and (3) the actions, including those that may be taken under existing laws, which are appropriate to carry out these recommendations.

Q.31. Should the SEC have the ability to discipline specialists if the NYSE fails to do so vigorously?

The NYSE has primary responsibility for initiating disciplinary action against specialists who have violated their affirmative or negative obligations as prescribed by Section 11(b) of the Act, Rule 11b-1 thereunder, and NYSE Rule 104. Pursuant to their affirmative obligations, specialists are obligated to trade for their own accounts to minimize order disparities and contribute to the continuity and depth of the market. Conversely, pursuant to their negative obligations, specialists are precluded from trading for their own accounts unless such dealing is necessary for the maintenance of a fair and orderly market.

Although the SROs have primary responsibility for enforcing specialist obligations, Rule 11b-1(b) provides that the Commission may enforce the negative and affirmative obligations of a specialist by ordering an exchange to suspend or cancel the registration of a specialist who has effected transactions that are not reasonably necessary to maintain a fair and orderly market pursuant to Rule 11b-1 and 2(iii), and that are not consistent with the rules of the exchange. In addition, every SRO is required under Section 19(g) of the Act to comply with the Act, the rules thereunder, and its own exchange rules and must enforce compliance of its members with these provisions. Further, under Section 19(h), the Commission has the authority to sanction an exchange for its failure to comply or enforce compliance by a member of the exchange with the Act, the rules thereunder, or the exchange's rules. Therefore, the provisions of Sections 11(b) and 19(g) and (h) provide the Commission with extensive authority to ensure that the exchanges enforce their rules, which include bringing disciplinary action or reallocation proceedings for violations of a specialist's obligations under the Act and the rules of the exchange. Further, the Commission also can bring an enforcement action directly against a specialist for activity which is in violation of the securities laws. Moreover, the Commission not only has the authority to enforce specialists' obligations, but also is continuously involved in inspection and oversight of SRO surveillance of specialist activities. Thus, the Commission currently has considerable authority to ensure that the NYSE provides the necessary incentives for specialist performance, which include the use of disciplinary action.

Q.32. Some have suggested that the specialist system performance in October of 1987 should not be judged according to the usual criteria because it was an unusual circumstance. Do you agree with this position?

Although unusual circumstances should be a factor in reviewing specialists' activities, they should not alleviate the specialists' obligations to maintain fair and orderly markets. The Report found variances in specialist performance during the market break, and the Report and the February 3rd testimony recommended relative measures of performance to weed out poorer performing specialists.

Q.33. What social benefit is to be derived from the stabilization of stock price movements? If there are benefits, do they outweigh the costs associated with granting a monopoly to market making specialists?

Section 11A(a)(1)(C) suggests as a goal of the federal securities laws "fair and orderly markets." Commission Rule 11b-1(a)(2), which articulates the primary responsibilities of a specialist, states that a specialist's course of dealings must be designed to "assist in the maintenance, so far as practicable, of a fair and orderly market." In addition, the rules of national securities exchanges are directed toward restricting specialists' dealer transactions to those reasonably necessary to maintain a fair and orderly market. Specialists must adhere to this standard at all times in buying and selling their specialty stock. Specialists are expected to execute stabilizing transactions, in an effort to maintain an orderly market, by buying for their own accounts to offset order imbalances when the price of the stock is falling and selling when the pricing is rising. This stabilization activity, in accordance with the obligations set forth in Rule 11b-1(a)(2) of the Act, and the exchange rules, minimize any temporary disparity between supply and demand. These efforts by specialists benefit the public in several ways. First, they help to ensure that stock price advances and declines occur smoothly, minimizing erratic price swings that have a negative effect on investor confidence. This is noted in the Institutional Investor Study Report of the Securities and Exchange Commission, [H.R. Doc. 64, 92nd Congress, 2nd Session (1971), Summary Volume, pg. 95.] which states that specialists ". . . behave in a stabilizing manner and thus reduce the size of the price fluctuations that could otherwise occur." Second, stabilization activity helps the specialist maintain narrow spreads between bids and offers that reduce transaction costs to investors. When spreads are wide the cost of buying and selling stock increases. Finally, it allows investors to have confidence that they can buy and sell stock in a market with reasonable depth, continuity, and liquidity. Specialists are required to risk capital in performing their stabilizing functions that benefits both investors and the marketplace. As discussed in the Report of Special Study of Securities Markets of the Securities and Exchange Commission (H. Doc. No. 95, 88th

Congress, 1st Session, 1963, pt. 2, p. 126), although the manner in which a specialist functions results in certain trading privileges, the specialist's risks in accumulating a stock inventory by meeting his responsibility to provide continuity and depth both in good and bad markets are ". . . the reasonable concomitant[s] to the many privileges a specialist enjoys." While the specialist is the focal point of trading on any one exchange, it should be remembered that he competes with specialists on other exchanges. Moreover, block positioners provide alternative means of liquidating for large institutional trades. While a specialist system is different from a competing market maker system, I find no basis to conclude that one structure or the other should be dictated by government fiat.

Q.34. Mr. Ruder, nearly a decade ago, the SEC developed a plan to establish a computer surveillance network known as MOS--Market Oversight System. In conception, it was a dream, capable of alerting enforcement officials to irregularities and even identifying any culprits. This ambitious proposal was dropped. In his testimony last May, SEC Chairman John Shad explained that MOS' objectives were being met, in part, by computers developed by the NYSE. They relay information to the SEC, and constitute a major source for enforcement actions.

Should the SEC review its decision to depend on the NYSE for computer surveillance? Is it possible to deploy a team of full-time SEC employees to work directly with the NYSE on computer surveillance?

Overall, the surveillance programs of the SROs are adequately monitoring their markets for trading abuses. All of the major markets now have in place audit trails that enable automated surveillance systems to "flag" suspicious trading activity for investigation by SRO and Commission enforcement staffs. Given current volume and complexity of equities and options trading and the increasing level of intermarket and international transactions, the SROs' development and continuing improvement of these audit trail and surveillance systems are high priorities for the Commission. Accordingly, the Commission's inspection program routinely evaluates the effectiveness of these SRO systems and has confirmed that steady improvements continue to be made. The current program of direct SRO surveillance of their markets, coordination of intermarket surveillance by the ISG, and overall monitoring by the Commission staff does not require radical modification at this time.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF
THE CHAIRMAN

March 30, 1988

RESPONSE TO WRITTEN QUESTIONS OF SENATOR PROXMIRE FROM
DAVID S. RUDER

The Honorable William Proxmire
United States Senate
Chairman
Committee on Banking, Housing, and
Urban Affairs
Washington, D.C. 20510

Re: The October Market Break

Dear Chairman Proxmire:

Thank you for your letter, dated October 23, 1987, in which you pose several questions concerning the October 1987 market break. I appreciate your patience in waiting for my reply. As you know, until quite recently Commission staff from the Division of Market Regulation ("Division") were engaged in reconstructing the market events of October and analyzing these events' effects on the securities markets. The Division's report, entitled The October 1987 Market Break: (February 1988) ("Report"), contains thorough analyses of many of the issues raised in your letter. Accordingly, the responses below frequently refer to the Report. In addition, where applicable, I have cited to the Commission's testimony concerning the market break before your Committee on February 3, 1988, as well as my letter to you dated March 4, 1988, transmitting a memorandum from the Division describing recent initiatives by the self-regulatory organizations to respond to the events of last October. 1/

Question 1: The desirability and advantage to having all securities-related instruments focused in the Securities and Exchange Commission ("SEC" or "Commission"). This would mean

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1/ *See* Securities and Exchange Commission Recommendations Regarding the October 1987 Market Break, as contained in Testimony of David S. Ruder, Chairman, Securities and Exchange Commission, before the U.S. Senate Comm. on Banking, Housing, and Urban Affairs (February 3, 1988) ("February 3rd testimony").

consolidating much of the Commodity Futures Trading Commission's ("CFTC") regulatory authority in the SEC.

As stated in the Commission's February 3rd testimony, a majority of the Commission believes that the current regulatory scheme needs to be re-evaluated in view of the linked nature of the stock and derivative markets. In the majority's view, the optimal solution would be regulation of all equity-related products, including stock index futures, by the SEC. An intermediate step, however, would be to provide the SEC final regulatory authority with respect to critical "intermarket" decisions for equity-related products. Such an intermediate step should include Commission authority to set margin levels for equity-related products, and resolve issues related to intermarket manipulation, as well as expansion of the Commission's present authority to review proposed index futures contracts to include consideration of the impact of those products on the maintenance of fair and orderly stock markets and investor protection.

Question 2: The extent to which derivative instruments relate to and affect the performance of the underlying security and vice-versa.

The markets for stock and derivative products have become increasingly linked. For example, when stock index futures were introduced, these instruments were thought of as being primarily vehicles for hedging investment risk in the underlying equity markets. While stock index futures have served this purpose, adding substantial liquidity to equity markets in normal times, they also have taken on a more significant role. The Report found that, because of the increasing use of the index futures markets by institutional investors, at times prices of stocks in an index are implicitly "discovered" first through the pricing of the index futures. Price movements in the futures index markets are quickly transmitted to the individual stocks themselves through the index arbitrage process.

This price leadership of the futures markets has had at least two significant effects on the equity markets. First, it has made it generally more difficult for stock specialists to fulfill their marketmaking obligations to maintain orderly markets. Second, the existence of the futures markets, with their relatively low transaction costs and margin requirements, may encourage additional trading in the equity markets, with a resultant increase in intra-day volatility. For a more complete discussion of the interrelationship between the stock and derivative products markets, please refer to Chapter Three of the Report.

Question 3: The desirability of higher margin requirements and stricter position limits in futures trading.

The Commission supports a temporary increase in initial margin levels for stock index futures to the 20% to 25% level for market participants, other than local traders on the floor of the futures exchanges. Such a temporary increase would dampen the effects of the extreme leverage afforded to stock index futures. Other alternatives, such as increasing initial margin requirements for futures sales in times of extreme downward price volatility, also should be considered. See February 3rd Testimony at pages 14-15 for a more expansive discussion.

The Commission believes that modification of position limits should be considered only if other measures to reduce excessive volatility are not successful.

Question 4: Establishing daily limits to price moves on stock index futures.

While price limits for stock index futures may be a rational response to the present leverage levels in those markets, their long-term utility is questionable if not coordinated with stock market closing and reopening mechanisms. When there is an alternative pricing mechanism provided by the stock market, price limits on index futures are somewhat self-defeating because institutions may simply shift their liquidations to the stock market. In addition, futures traders are placed at substantial risk because of the inability to trade out of their futures positions.

As explained in the Commission's February 3rd testimony, the Commission does not support price limits for individual stocks, i.e., the closing of a stock for the rest of the trading day after a certain price is reached. We believe that such limits are inconsistent with the continuous auction market concept, and that, rather than calming markets, they might induce panic and accelerate trading as the limits approach.

Question 5: The use of program trading.

Program trading involves the trading of whole portfolios or baskets of stocks, sometimes in connection with related futures or options transactions. Under most circumstances, program trading provides a useful means for large investors to effect stock transactions. For large investors holding a sizeable, diversified portfolio of stocks, it may be very inefficient or expensive to trade stocks on an individual basis. As a result, many large institutions employ program trades to rebalance portfolios. Similarly, many large institutions view the equity market as a single investment. Instead of valuing individual securities, they balance their portfolios among equities, debt, and other broad investment categories, using stock indexes as a means of investing in equities. Finally, index arbitrage, a form of program trading, helps to maintain the pricing relationship between the individual stock and derivative index markets.

During the market break, the amount of program selling was at times so large, and so far beyond the substantial liquidity that is generally available in the futures and stock markets, that market mechanisms adequate for the vast majority of trading situations failed. It became apparent that new trading mechanisms, including program trading, can cause extraordinary peak volume and volatility that overwhelm the capacity of markets.

We have made three recommendations concerning program trading: that the New York Stock Exchange examine the feasibility of creating specialist posts for trading baskets of stocks; a system for the public dissemination of program trading information; and a regulatory reporting requirement for program trading. For a more detailed discussion of various aspects of program trading, please refer to Chapter Three of the Report.

Question 6: Whether the capital of the specialists on the exchanges is adequate.

As explained in the Commission's February 3rd testimony, while specialist capital levels appear to be adequate for normal trading situations, the Commission is not confident that specialist capital will remain sufficient in times of great volatility. Accordingly, the Commission believes that minimum specialist capital requirements should be increased, and that the exchanges should explore the feasibility of establishing lines of credit for small specialist units, and developing a private emergency fund to support the specialists' trading function. A thorough analysis of equity specialist capital requirements and the capital available to NYSE and Amex specialists during the market break is provided at pages 4-48 to 4-67 of the Report. In addition, the memorandum attached to my March 4, 1988 letter details the steps that are being taken by the exchanges to review specialist capital requirements.

Question 7: A comparison of the performance of the specialist system used by the exchanges versus the dealer system used by the over-the-counter market during the past week. To what extent was there a continuity of trading in one trading system versus the other and what, if anything, can be learned by comparing the performance of these two systems during the past week?

Both the exchange specialist system and the dealer system of the over-the-counter market experienced serious difficulties and disruptions in the week of October 19. A comparative assessment of their performance is not really feasible in view of the extreme dislocations in both markets. We note, however, that both systems experienced severe strains which reflected both the significant selling pressure and large volume of order flow. In addition, the problems in both markets underscored the need to ensure that adequate operational capacity is maintained and that steps are taken to ensure that adequate market maker capital is available. Please refer to Chapters Four and Nine of the Report for detailed discussions of exchange specialist performance and the over-the-counter market.

Question 8: Improvements that should be made in the clearance and settlement system.

During October 1987, clearing agencies performed well, and approximately 95% of the trading volume was cleared and settled within routine time frames. Although some losses were suffered, clearing agency safeguards were effective in preventing significant or widespread losses. Nevertheless, the volume and volatility of the market break suggest the need for improvement in post-execution processing and clearing agency safeguards against member default. See Report at Chapter Ten (Introduction) and the February 3rd testimony at pages 23-24. As stated in those documents, the Commission has made the following recommendations:

1. The American ("Amex") and New York ("NYSE") Stock Exchanges and the National Association of Securities Dealers ("NASD") should consider accelerating efforts to compare all trades on the trade date. Currently, over 50% of share volume is compared through two-side trade input that results in comparisons being effected one or more days after the trade date. Automated systems should be expanded to facilitate comparison at or near the time of trade execution.

2. Clearing agencies should consider enhancements to their risk management systems to reflect risks generated by increased price volatility and trading volume. These considerations should include: (1) enhanced member monitoring systems to obtain better and more current information about members' financial strength, their activities in other markets, and their customers' activities; and (2) whether risks posed by clearing agency members require increased capital requirements or the deposit of additional assets with the clearing agencies.

3. Options clearing systems, in particular, should reexamine safeguards and consider improvements inasmuch as equity price volatility can generate geometric increases in option price volatility. The Commission believes the Options Clearing Corporation ("OCC") should: (a) consider enhancing member monitoring techniques to provide better early warning of risks and better measures for dealing with those risks when they appear; (b) reassess its basic volatility assumptions and margin formulas as well as the manner and timing of variation margin calls (which are used when margin is insufficient to cover intra-day volatility); and (c) examine whether it can obtain earlier warning and protection against a member's sudden insolvency, especially when it occurs late in the day after banking hours.

4. As stated in the February 3rd testimony, the Commission recommends that initiatives should be taken to develop a more coordinated credit, clearing, and settlement system across stock, option, and future markets. Such a system would benefit the marketplace by: (a) decreasing uncertainty about the total risk exposure of participants; and (b) facilitating the flow of credit between markets, thereby improving liquidity.

The memorandum attached to my March 4, 1988 letter explains the remedial measures that have been taken by clearing agencies since the market break. In brief, the National Securities Clearing Corporation ("NSCC"), the Depository Trust Company, and the Options Clearing Corporation ("OCC") plan to convene meetings, under Commission auspices, to establish higher standards of cooperation among all clearing facilities. NSCC is enhancing its ability to monitor and collect marks-to-the-market through a new system of computerized parameters that will be available within two to three months. OCC, by implementing new standards, has improved significantly its efficiency in issuing and collecting variation margin calls. Moreover, OCC has undertaken an extensive study of its systems and standards (including its monitoring systems, margin levels, members' capital requirements, and option settlement processes) in order to identify and correct any structural weaknesses.

Question 9: The reasons for the decision last Monday to suspend trading in the Hong Kong market for one week.

Hong Kong's Hang Seng Index lost 11.3% of its value on October 19, 1987. This precipitous drop and the prospect of worsening conditions probably motivated the closing of Hong Kong's stock and futures exchanges. We understand that the Hong Kong government is undertaking a comprehensive review of its markets, including the circumstances surrounding the closing of the stock and futures exchanges. For a more detailed discussion of events in the Hong Kong market, please refer to page 11-17 of the Report.

Question 10: The implications for domestic securities markets and firms of malfunctions or protracted interruptions in trading in foreign markets.

The events of October 19 and 20 dramatically confirmed the internationalization of the securities markets. Trading in foreign markets clearly affects trading in U.S. markets, and vice-versa, although the U.S. markets more often lead than follow other stock markets. Chapter Eleven of the Report describes the interdependency of the world's securities markets. Although it is impossible to predict the magnitude of the impact, malfunctions or protracted interruptions in trading in foreign markets are bound to affect U.S. markets and firms. In part because of these concerns I recently have met with regulators in Japan and the United Kingdom to discuss, among other matters, ways in which the Commission could enhance information sharing arrangements with those regulators.

I hope that these responses have adequately addressed your questions. Should you have any further requests, please contact Richard G. Ketchum, Director, Division of Market Regulation, at (202) 272-3000.

Sincerely yours,

David S. Ruder

David S. Ruder
Chairman

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF
THE CHAIRMAN

RESPONSE TO WRITTEN QUESTIONS OF SENATOR RIEGLE FROM
DAVID S. RUDER

The Honorable Donald W. Riegle, Jr.
Committee on Banking, Housing, and
Urban Affairs
United States Senate
Washington, DC 20510

Re: October 1987 Market Break

Dear Senator Riegle:

This letter responds to questions you included in a November 13, 1987 letter sent to my office by Senator Proxmire on behalf of the Committee. I appreciate your patience in waiting for my reply, and welcome this opportunity to respond to the issues you raised concerning the October 1987 market break. Because the Commission's Division of Market Regulation recently completed an extensive study of this market crisis entitled The October 1987 Market Break (February 1988) ("Staff Report"), I now am better able to provide complete responses to your questions. Because many of the issues you raise are thoroughly analyzed in the Staff Report, my answers refer frequently to it. In addition, where applicable, I have cited my February 3, 1988 testimony before the Committee concerning the market break, 1/ as well as my letter to Senator Proxmire dated March 4, 1988, transmitting a memorandum from the Division of Market Regulation describing recent developments.

Question 1. SEC Resources

a. Were you satisfied with the ability of the agency to respond to a sudden market plunge?

I was very satisfied with the Commission's ability to respond to market events in October. Chapter Two of the Staff Report notes that throughout October the Commission closely monitored trading data, capital positions of broker-dealers and specialist units, mutual fund activity, and world-wide market movements. In addition, the Commission interviewed and received data from key market participants and exchange officials as to the amount and type of trading being done. The

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1/ See Testimony of David S. Ruder, Chairman, Securities and Exchange Commission, "Securities and Exchange Commission Recommendations Regarding the October 1987 Market Break," before the U.S. Senate Comm. on Banking, Housing, and Urban Affairs (February 3, 1988) ("February 3rd testimony").

Commission also kept in close contact with the various self-regulatory organizations ("SROs"), other regulatory agencies, and market participants to consult on major decisions and to monitor the SROs' ability to handle record volume and volatility.

b. How might additional resources be used by the SEC in the event of another significant market break or other unexpected crisis?

As described above and in greater detail in the Staff Report, the Commission has been able to respond effectively to recent market events with the resources currently available. In light of the increasing complexity and volatility of today's markets, however, the Commission currently is increasing staff levels in certain divisions, including the Division of Market Regulation, which has primary responsibility for overseeing the operations of the securities exchanges. These and other measures now are possible due to the recent significant increase in the Commission's budget appropriation. Such staff will enable the Division to better coordinate its contingency planning and would reduce delays in completing more routine responsibilities during periods of market stress.

Question 2. Safety Net

Can you describe what the ramifications might be from a major firm failure if such a market break should ever occur again at a time when the securities industry was not enjoying record earnings? Is there any kind of federal safety net to minimize the effect of such a failure or should we be thinking about putting new provisions into place in this regard?

It is impossible to gauge the possible ramifications of a major firm failure, especially because there has been no such failure in the recent past. Nevertheless, it is clear that customers, other broker-dealers, securities settlement and clearance systems, creditors, and securities markets would be affected to some degree by such an event. Present Commission rules would, however, minimize the impact of a major firm failure on the above parties.

The Commission's customer protection rule, Rule 15c3-3 under the Securities Exchange Act of 1934 ("Act"), requires broker-dealers to segregate customers' property, and forbids them from using customers' property to finance their inventory or expenses. The Rule was established so that customers could promptly obtain their property from broker-dealers.

The Securities Investor Protection Act of 1970 ("SIPA") authorizes the Securities Investor Protection Corporation ("SIPC") to satisfy customer net equity claims up to $500,000 per customer (with a limit of $100,000 per customer on cash claims) if a firm fails. In response to Commission concerns regarding the ability of the SIPC fund to absorb one or more large firm failures, SIPC negotiated with a diverse consortium of banks a $500 million line of credit. This line of credit, when combined with the approximately $381 million in the SIPC fund (as of February 29), should permit SIPC to meet customer demands in a large firm failure.

The "safety net" provided by SIPA is premised upon utilizing a SIPC liquidation only as a last resort, however. The self-regulatory oversight and early warning surveillance systems (for a discussion of early warning levels in the net capital rule and of self-regulatory organizations, see page 5-2 of the Staff Report) are designed to work out a large firm's problems in an environment short of liquidation. If a large firm was experiencing operational difficulty or losing money over a period of time, its Designated Examining Authority and the Commission would be watching the firm closely and the firm might be required to, among other things, accept no new customer accounts, transfer customer accounts to other broker-dealers, reduce its inventory position, or curtail or shrink its business. SIPA also has provisions for the transfer of a failed firm's customer accounts to another broker-dealer to facilitate the prompt settlement of customer claims.

Effective safeguards are in place at securities clearing agencies to deal with problems resulting from member broker-dealers' defaults resulting from their failures (for a detailed discussion, see Chapter Ten of the Staff Report). For example, the National Securities Clearing Corporation ("NSCC"), which clears and settles transactions for approximately 400 firms, has early warning systems in place to detect excessive risk to NSCC. If NSCC perceives that a member poses undue risk to NSCC, it will increase surveillance of that firm and may require additional clearing fund deposits (which are based on a member's settlement activities) and/or additional mark-to-market payments (the difference between the contract price and the market value) for failed trades. If a member defaults, NSCC can reverse allocations of securities to the member for which NSCC has not received payment, use the member's clearing fund deposit to cover losses resulting from the member's default, or charge NSCC's retained earnings or the clearing fund (the clearing fund assessment would result in a pro rata assessment to all clearing fund members) for losses resulting from a member's default.

Notwithstanding these protections, the psychological impact of a major firm failure is impossible to predict, especially because the effect of other economic factors present at such time would have to be taken into account. A failure could alarm other firms' customers and cause a run on other firms' assets by their customers. However, the Designated Examining Authorities have informal procedures to allow a solvent firm to continue in business while liquidating positions and transferring customer accounts, although in violation of the Commission's financial responsibility rules, with the consent of the Commission.

Question 3. Broker-Dealer Oversight

a. Even before the recent market collapse, there were indications of problems with broker-dealer oversight and supervision. As a result of the volume and confusion during the week of October 19, further weaknesses may have been exposed in this area. Is the SEC reviewing this area as part of its report on the market slide?

The Commission staff conducted an extensive review of the activities of brokerage firms and specialist units during the market break. In particular, Chapter Four of the Staff Report contains a description of specialist performance, Chapter Five includes a description of broker-dealer capital adequacy concerns, and over-the-counter ("OTC") market making activity is analyzed in Chapter Nine. In general, the Commission has concluded that there are weaknesses in areas such as specialist and market maker performance that must be remedied. Possible solutions, including increased capital requirements and intermarket coordination, are described in detail in the Staff Report. In addition, the Staff Report identified weaknesses in many firms' order handling systems. We believe that the Commission's and the SROs' examination programs must ensure that these system capacity problems are addressed.

b. Will the SEC be inquiring into rumors of: broker-dealers who were inaccessible during the decline? Broker-dealers who were systematically trading for the benefit of their own accounts over their individual customers' accounts?

As noted above, OTC market maker performance during the October market break is examined in Chapter Nine of the Staff Report. Trading ahead of customers, or frontrunning, is discussed in Chapter Three of the Staff Report. The Commission continues its efforts to uncover specific instances of frontrunning and is pursuing initiatives, such as enhanced market surveillance and intermarket information sharing, which we believe will enhance our ability to uncover such trading.

The Commission's office of Consumer Affairs and Information Services analyzes, in Chapter Twelve of the Staff Report, customer complaints concerning broker-dealer accessibility during the market break received by the Commission and the SROs. The Commission, in conjunction with the SROs, will pursue those complaints which raise regulatory concerns. In addition, the Commission has recommended that the National Association of Securities Dealers examine the issue of accessibility of OTC market makers during the break.

c. Banks have regulatory limitations on the percentage of their own capital that they can lend to a single customer; do you think that securities firms should have similar regulatory restrictions on the capital they can lend to any one customer -- given that if a large transaction fails other customers and even other firms could be exposed?

The regulations governing the amount of capital a broker-dealer may lend to customers are much more stringent than those governing loans by banks to customers. Rule 15c3-1 under the Act, the Commission's net capital rule, generally requires broker-dealers to deduct receivables from net worth unless they are collateralized by readily marketable securities or commodities. Generally, broker-dealers are required to obtain margin when extending credit to other persons in securities transactions. To the extent no margin is received, the broker-dealer must take a charge to its capital. Broker-dealer receivables from other broker-dealers must also be secured or the broker-dealer is required to take certain capital charges when computing its net capital. 2/

Moreover, Rule 15c3-3 under the Act, the Commission's customer protection rule, prohibits a broker-dealer from using customers' property (both money and securities) other than to finance customer transactions. This rule requires a broker-dealer to segregate customer funds from the operation of its business. Rule 15c3-3 penalizes broker-dealers for extending credit to any one customer in excess of 25% of the broker-dealer's liquid net worth (unless the loans are financed by

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2/ Initial margin rules issued by the Federal Reserve Board and maintenance margin requirements of the various SROs limit the amount of credit a broker-dealer may extend to customers depending on the type of security purchased.

entities other than the broker-dealer or specifically approved by the broker-dealer's Designated Examining Authority).

d. Do you believe that public and private securities firms should be required to make public disclosure of their own capital investment?

Currently, pursuant to Rule 13f-1 under the Act, large institutional investment managers must file reports quarterly with the Commission with respect to accounts valued at $100 million or more over which they exercise investment discretion. In addition, the large majority of securities firms contacted by the Commission in connection with the Staff Report cooperated in supplying customer as well as proprietary trading information to the Commission. As noted in my February 3rd testimony, however, the Commission believes it is appropriate to consider requiring the filing of large trader reports describing in detail trading activity by broker-dealers and other institutional market participants.

Question 4. Internationalization

a. Have recent events suggested that our markets should be positioned or operated any differently in response to the impact of international markets?

As explained in the Staff Report and in my February 3rd testimony, the Commission believes that today's markets are becoming increasingly global in nature. The Commission for several years has sought enhanced cooperation and coordination with foreign regulators in a variety of ways, including bilateral enforcement and surveillance agreements and participation in multinational forums such as the International Organization of Securities Commissions ("IOSC"). We will continue these efforts and will pursue additional initiatives, including the development of international trading, clearance and settlement linkages, international trade and quote mechanisms, and adequate intermarket financial oversight systems. These measures are described in greater detail in Chapter Eleven of the Staff Report.

b. Integration of the world's markets by instant electronic linkage has been suggested as holding the potential to concentrate a global barrage of sell orders in one market at the same time. Is there any indication that this occurred on October 19? Is this a real danger in your view and, if so, is there any way to limit its destructive potential?

Chapter Eleven of the Staff Report contains a detailed discussion of October's international market developments, focusing on events in London, Tokyo, and Hong Kong. This analysis shows that to the extent individual firms have proprietary worldwide systems already in place, we did not witness a global barrage of trading in any one market during the October market break. Rather, all markets faced steady and concentrated selling. Moreover, it bears emphasizing, that the overwhelming percentage of trading in U.S. securities occurred on U.S. trading markets during normal trading hours. It is very difficult to predict whether the outcome would have differed had the world's markets been linked to an even greater extent, although we see no reason why selling would focus on one market and ignore the ability to raise cash and reduce risk through liquidiating on all markets. We believe, however, that implementation of the initiatives described in my answer to the first part of this question would contribute significantly to the efficient functioning of the world's markets during turbulent times. In addition, capacity and intermarket coordination enhancements now being implemented by domestic stock exchanges will better enable those markets to handle future trading surges, whether domestic or foreign in origin.

c. Experts have suggested that the impacts of global interrelationships between markets are already beyond the realm of regulatory control or even surveillance. Do you agree?

I do not agree that the globalization of the world's securities markets is beyond regulatory control or that surveillance measures cannot be used to effectively police those markets. The Commission participates in a number of multinational organizations working toward enhanced uniformity and coordination in market regulation, including the IOSC and the International Society of Securities Administrators. In addition, we now have in place memorandums of understanding with regulators in Japan, Switzerland, the United Kingdom, and three Canadian provinces that provide for the sharing of information and assurances of cooperation in Commission and foreign agency investigations and litigation. The Commission is committed to increasing cooperation between securities regulators worldwide. Toward this end, I recently met in Japan with officials of the Ministry of Finance, the Securities Bureau, and the Tokyo Stock Exchange to discuss issues relating to the October market break, information sharing, surveillance, enforcement, and other areas of mutual interest. I also have recently been to London to confer with British officials on similar regulatory issues. Such efforts should enhance our ability to regulate increasingly interrelated markets.

d. Would you support formation of an International Securities Regulatory Commission to help avoid future panics?

The Commission clearly is committed to strengthening its ties with foreign regulators. I believe the measures outlined above, in the Staff Report, and in my testimony before Congress, will further these efforts. The Commission has not formally considered formation of an International Securities Regulatory Commission, although this may have to be considered as we move increasingly toward a global market. A good first step in this direction is the effort to encourage all countries with active trading markets to join IOSC. I am not convinced, however, that the October market break would have been avoided or even mitigated had such an international regulatory body been in existence.

I trust that this letter is responsive to your questions. Should you have any further questions or concerns, please do not hesitate to contact me, or Richard G. Ketchum, Director, Division of Market Regulation, at (202) 272-3000.

Sincerely yours,

David S Ruder

David S. Ruder
Chairman

cc: The Honorable William Proxmire
Chairman, Senate Committee on Banking,
Housing, and Urban Affairs

Robert Johnson
Chief Economist

RESPONSE TO WRITTEN QUESTIONS OF SENATOR RIEGLE FROM
DAVID S. RUDER

Addendum A

Questions from Senator Donald W. Riegle, Jr.

Q.1. One point that was made in the Brady Report was that information gathering was considerably easier in the futures market than in the equities market. What do you plan to do to improve the information gathering capacity with respect to the securities markets as recommended by the Brady Report?

Please refer to my response to questions 10 and 11, above, from Senator Proxmire. I believe that my answer to those questions is fully responsive to the question you have posed.

Q.2. How, if at all, has the recent market volatility affected the capital formation process and the new issue market?

The market break on October 19, 1987 and the market volatility that followed appear to have had a significant impact on the capital formation process. The first aspect of this change noted by the Commission's Division of Corporation Finance relates to withdrawals or delays in connection with registration statements filed prior to October 19, 1987. Between the market break and the end of February 1988, 31 public offerings for which registration statements had been filed prior to October 19th were still pending while the registrants considered whether to go forward with the offering, and 22 offerings have been withdrawn altogether. Fifteen offerings were delayed after the break but resumed before the end of February. This reflects an increase in the number of such offerings either delayed or withdrawn as compared with periods of more normal market activity. The length of time for which such offerings were delayed also increased.

In addition, initial public offerings ("IPOs") filed in the period from October 19, 1987 to the end of January 1988 declined to an average of 26 offerings per week as compared to the average of 52 offerings per week filed in the six weeks prior to October 19. (Home office filings declined from an average 33 to 14 weekly; regional filings from 19 to 12 weekly.) While the filings made with the Commission's regional offices on Form S-18 (registered offerings of less than $7.5 million) or pursuant to Regulation A (public offerings of less than $1.5 million exempt from registration pursuant to Section 3(b) of the Securities Act of 1933) dropped after the market break, they nevertheless are higher for the four months after October 1, 1987 (the beginning of the fiscal year) than for the same period last year. This increase principally is accounted for by an increase in "blank check" filings. Blank check offerings involve the public offering of securities in a company with no operations of its own, with the intention that such company will later find and merge with a company with an established business.

The dollar amount represented by IPO's fell to an average of $7 billion monthly for the three months after the market break, compared to an average of $13 billion monthly for the 12 months prior to the break. (October IPO's amounted to an unusual $24 billion due to two multi-billion dollar offerings.) Of this amount, debt IPO's fell to an average $2 billion monthly from $6 billion; equity IPO's to $5 billion from $7 billion. Total dollar amount represented by all registration statements filed with the Commission fell to an average of $26 billion monthly after the break compared to an average of $45 billion monthly for the 12 months prior to the break. The total amount represented by registration of debt securities fell to an average $15 billion monthly from $26 billion; the total amount represented by equity to $11 billion from $19 billion.

Since the market break, a lesser percentage of IPO's are traditional new offerings (i.e., initial primary offerings of securities to the public by new or developing companies), and asset backed securities offerings account for a greater percentage. While such offerings are technically IPO's, the issuers are trusts or special purpose subsidiaries formed by sponsoring organizations who are frequent participants in the market. The level of new offerings in the asset-backed security market has not fallen like other IPO offerings since the market break. Another area of non-traditional IPO's relatively unaffected by the market break involves spin-offs of shell corporations. These are a form of blank check offering where a public company creates a company with no operations and distributes its securities to the public company's shareholders in the form of a stock dividend.

Repeat filings (offers by issuers not involved in their initial round of public financing) also declined after the market break, to an average of 28 weekly from an average of 45 weekly in the six weeks prior to the break. Such filings remained at relatively lower levels through January 1988, although their number is now rising. A further factor to be considered with respect to the repeat offerings is that many of those offerings involved secondary offerings by existing shareholders rather than capital raising by the registrant.

The Division of Corporation Finance noticed a decline in the number of offerings involving junk bonds or structured financing (such as leveraged buy-outs). It has been reported that the market for such offerings is now reviving. Another noticeable trend after the break related to the ratio of debt to equity offerings. Prior to the market break, debt issues represented approximately 20-30% of the total offerings registered. During the seven weeks immediately after the break, debt issues represented 40-60% of the total offerings registered, although the ratio has now returned to pre-break levels.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF
THE CHAIRMAN

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SANFORD FROM
DAVID S. RUDER

The Honorable Terry Sanford
Committee on Banking, Housing,
and Urban Affairs
United States Senate
Washington, DC 20510

Re: October 1987 Market Break

Dear Senator Sanford:

This letter responds to questions you included in a November 13, 1987 letter sent to my office by Senator Proxmire on behalf of the Committee. I appreciate your patience in waiting for my reply. As you know, until quite recently, Commission staff from the Division of Market Regulation were engaged in reconstructing the market events of October and analyzing these events' effect on the securities markets. The Division's report, entitled The October 1987 Market Break (February 1988) ("Staff Report"), contains thorough analyses of many of the issues raised in your letter. Accordingly, the responses below frequently refer to the Report. In addition, where applicable, I have cited my February 3, 1988 testimony before the Committee concerning the market break, 1/ as well as my letter to Senator Proxmire, dated March 4, 1988, transmitting a memorandum from the Division describing recent initiatives by the self-regulatory organizations in response to the events of last October.

> Question 1. Many have commented that one of the lessons that must be learned from the past three weeks is that portfolio insurance does not work in a bear market. How much truth is there to that assessment? What effect do you believe doubts about portfolio insurance will have on the futures markets?

It is clear that portfolio insurance strategies did not function as well as had been expected during the October market break. In particular, when markets were falling

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1/ See Testimony of David S. Ruder, Chairman, Securities and Exchange Commission, "Securities and Exchange Commission Recommendations Regarding the October 1987 Market Break," before the U.S. Senate Comm. on Banking, Housing, and Urban Affairs (February 3, 1988) ("February 3rd testimony").

rapidly, portfolio managers had difficulty selling stock index futures or did not receive anticipated protection levels from such sales. Indications are that as a result of these perceived shortcomings the value of assets now covered by portfolio insurance strategies is down significantly from pre-crash levels. 2/ This could lead to an easing of downward pressures on index futures and stock prices during future periods of market volatility. Chapters Two and Three of the Staff Report contain detailed discussions of portfolio insurance and its role in the October market break.

> Question 2. A recent article in the Financial Times of London suggests that one of the reasons for the crash on the 19th is that too little index arbitrage took place and that the arbitragers were unable to keep the futures index and the stock prices moving in tandem. Would you agree with this assessment? If so, what could be done to prevent such large spreads between the stock index and the futures index? Are you concerned about the amount of leverage added to the system by the widespread use of index arbitrage?

The Commission repeatedly has emphasized its belief that index arbitrage serves a useful function by promoting accurate price relationships between derivative instruments and stock prices, thereby enhancing efficiency and the viability of strategies that rely on such pricing relationships. On October 19, there were periods when delays in the New York Stock Exchange's ("NYSE") order routing systems effectively precluded index arbitrage activities, causing a decoupling of the stock and futures markets. In addition, the NYSE requested that its order routing system not be used for index arbitrage for the remainder of the week of October 19. While this decoupling is not desirable under normal conditions, during periods of high volatility index arbitrage and other index-related strategies can at times overwhelm the stock and futures markets with surges of trading volume. On October 19 and 20, stock index futures often traded at huge discounts to the stock market. Had additional index arbitrage taken place during these periods, the sell pressure put on the stock market could have caused stock prices to fall even further.

2/ See, e.g., Smith, Use of Portfolio Insurance Fell After the Crash, Wall St. J., January 12, 1988, at 4; Voorhees, Can Portfolio Insurance Make a Comeback?, Institutional Investor, January 1988, at 57-58.

The most effective method to decrease the leverage associated with index-related strategies is to increase stock index futures margin. As I stated in my testimony before the Committee, the Commission believes that initial margin levels for stock index futures should be increased to approximately 20-25% for non-floor traders. Chapter Two of the Staff Report describes index arbitrage and other index-related trading activity during October.

> Question 3. As you know, the Committee will soon be considering legislation to amend the Glass-Steagall Act separating investment banking and banking. Have you seen anything in the last three weeks that suggests that banks should not be given additional securities powers or that adequate "Chinese Walls" cannot be created to prevent unsound loans from a bank to its securities affiliate? What is your assessment of the lending between Continental Illinois and First Options?

The Commission provided its views on S. 1886, the Financial Modernization Act of 1988, on December 3, 1987. In discussing the safeguards that should be established if the Glass-Steagall Act were to be repealed, the Commission took into account the experience of bank securities activities during and after the October market break. As you know, the Commission indicated that it could not support the proposed repeal of the Glass-Steagall Act, given the structure of S. 1886 at that time, particularly its failure to address existing bank securities activities. However, on February 29, 1988, the Commission subsequently expressed its support for S. 1886 after Title III, drafted by the Commission and the bank regulatory agencies, was added to the bill.

The lending relationship between Continental Illinois National Bank and Trust Company of Chicago ("Continental Bank") and its wholly-owned subsidiary, First Options of Chicago, Inc. ("First Options"), is analyzed in Chapter Five of the Staff Report (see pp. 5-39 - 5-43). First Options was purchased by Continental Bank from Spear, Leeds & Kellogg in December 1986. The Office of the Comptroller approved the acquisition, subject to certain restrictions. One of the conditions in the Comptroller's "approval letter" restricted Continental Bank's infusion of capital or extension of credit to First Options to the same legal limitations applied to non-affiliated customers. Because of an unprecedented high volume of trading and losses incurred by market makers for which it cleared, First Options needed additional capital on October 19 and 20, 1987 to remain in compliance with the Commission's net capital rule. According to the Comptroller, Continental Bank infused capital into First Options in violation of the lending limitations imposed by the Comptroller. 3/

On October 21, after First Options was informed by the Comptroller that it would not waive the extension of credit limitation, First Options entered into a revolving subordination loan agreement ("revolver") with the holding company of Continental Bank ("Holding Company"). The Holding Company lent $130 million to First Options through the revolver, which First Options in turn paid to Continental Bank. This, plus payments of unrelated secured loans from the Bank, placed Continental Bank back into compliance with the provisions of the Comptroller's "approval letter."

I am unaware of any evidence indicating that the loans made by either Continental Bank or the Holding Company placed either entity in any financial jeopardy. In addition, it is important to emphasize that First Options' access to additional capital averted severe liquidity problems for the firm. These liquidity problems could have had a major impact on the operations of the options markets and a large number of broker-dealers.

Question 4. In recent weeks, many have questioned whether it makes sense to have the SEC regulate the securities markets, including options on securities and foreign currencies, while the CFTC regulates futures contracts, options on futures contracts and options on foreign currencies. How well do you think the split regulation of the markets worked in the recent weeks? What advantages and disadvantages do you see from combining the regulation under one agency?

The Commission and the CFTC currently enjoy a good working relationship in regulating their respective markets. At the same time, the events of October have made it clear that we now have a unified market for stocks and stock-based derivative products. As I stated in my February 3rd testimony before the Committee, a majority of the Commission believes that regulatory authority over the stock index futures markets should be granted to the Commission. Pending

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3/ There was disagreement between the Comptroller and Continental Bank over whether Continental Bank did in fact exceed its lending limitations to First Options. The Comptroller testified before Congress that Continental Bank's action "wasn't a blatant disregard of the limit. They had a theory . . . with which we disagreed . . . that they had not exceeded the limit."

a grant of authority over stock index futures, the Commission should receive authority over certain intermarket issues and should be permitted to review proposed and existing stock index futures contracts to determine if they will impact the fairness and orderliness of the stock markets.

My February 3rd testimony contains a detailed description of regulatory coordination and consolidation measures that the Commission believes should be pursued regardless of the eventual disposition of jurisdictional issues. In addition, my March 4, 1988 letter to Senator Proxmire and the memorandum attached thereto describe the intermarket coordination discussions which already have taken place.

> Question 5. In addition to concerns about jurisdictional lines between the regulatory power of the SEC and the CFTC, have been concerns about a need to better coordinate our market regulation with that occurring in London, Tokyo and other parts of the world. Do you believe we need formal ties between our regulators and those in the principal trading countries? How do you envision such formal ties being established?

As stressed in the Staff Report and in my February 3rd testimony before the Committee, today's markets clearly are global in nature. Because of the trend toward globalization, the Commission has actively pursued discussions and specific agreements with foreign regulators. For example, the Commission already participates in a number of multinational organizations working to enhance uniformity and coordination in market regulation, including the International Organization of Securities Commissions and the International Society of Securities Administrators. In addition, we now have in place memorandums of understanding with regulators in Japan, Switzerland, the United Kingdom, and three Canadian provinces which provide for the sharing of information and assurances of cooperation in Commission and foreign agency investigations and litigation.

As a result of the October market break, the Commission will pursue additional cooperative measures, including the development of international trading, clearance and settlement linkages; international trade and quote mechanisms; and adequate intermarket financial oversight systems. These initiatives are described in greater detail in Chapter Eleven of the Staff Report. In pursuit of closer regulatory coordination, I met recently in Japan with officials of the Ministry of Finance, the Securities Bureau, and the Tokyo Stock Exchange to discuss issues relating to the October market break, information sharing, surveillance, enforcement, and other areas of mutual concern. I also recently visited London to confer with British officials on similar regulatory issues. The Commission believes that the regulatory initiatives described above should enhance our ability to regulate markets which are increasingly interrelated.

> Question 6. Do you agree with Eliot Janeway's assessment that the futures market led to inflation of the stock market? What steps could be taken to prevent such an inflation of the market to occur again?

The Commission believes that the use of derivative products contributed significantly to the volatility and volume surges experienced in the stock market during the October market break. An argument can be made that the availability of stock index futures-based risk management strategies such as portfolio insurance increased the willingness of investors and portfolio managers to accumulate larger equity positions. The resultant increased demand for stocks may have contributed to price increases. It also is probable that the relatively low margins required for stock index futures transactions contributed to a high level of speculative trading that may have driven futures prices, as well as component stock prices, above their intrinsic values. Partly for this reason, the Commission favors increasing margin levels for stock index futures to a level between 20-25% for non-floor traders. There are, however, several other factors that contributed to the stock market's rise from January through September 1987, such as increased foreign investment in U.S. stocks and relatively low interest rates. These are discussed more fully in the response to Question 7.

Chapters One through Three of the Staff Report provide a detailed description of the effect of derivative products on the stock market during the October market break and in general.

> Question 7. Would you agree [with John Phelan] that the increase in takeover activity in recent years has contributed to a rise in stock prices? What steps do you see the SEC taking to control this inflation of stock prices? Should steps be taken to encourage the channeling of this additional capital into tangible assets for production?

The Commission agrees that the takeover activity in recent years contributed to the rise in stock prices. Our Office of Economic Analysis has examined that specific question informally and they advise me that there is strong support for that position. Nevertheless, the increased demand for stocks which led to increased stock prices also reflected a variety of other factors, such as the recent overall strength of the economy, strong corporate earnings, relatively low interest rates, and considerable foreign demand for U.S. stocks. In addition, a certain amount of "speculative fever" or undue optimism may have played a role in the steady increase in stock prices leading up to October. For the reasons set forth in my testimony before Congressman Markey's Subcommittee last September, 4/ however, the Commission currently does not anticipate taking steps to discourage takeover activity.

> Question 8. Given the strong decline in the market, what effect do you think the debt accumulated as a result of takeovers will have on the economy and on the markets?

Corporate restructurings, stock buy-backs, leveraged buyouts, and takeovers have been associated with an increase in firm debt-to-equity ratios and level of debt of non-financial corporations. The decline in the market may lead to further use of debt financing because the decline increased the cost of equity financing relative to debt financing. Nevertheless, the effects of this increased debt on the economy and markets are unclear. To the extent the market decline signals, or increases, the likelihood of an economic downturn, high debt levels may force leveraged companies to cut back inventories to service the debt and increase the rates of corporate defaults. The changes could, in turn, have economy-wide effects by exacerbating the downturn and also resulting in wealth losses to individual shareholders. Increased debt levels, however, also can increase management efficiency with beneficial effects for the economy and financial markets. Specifically, the issuance of debt, by bonding management to pay future interest payments, may encourage management to operate more efficiently. Further, to the extent that a large portion of debt issued in takeovers has been used to finance leveraged buyouts, which take publicly held companies private, any resulting increased risk is not borne by holders of publicly traded equities. Finally, the debt issued in takeovers may not be permanent.

4/ *See* Testimony of David S. Ruder, Chairman, Securities and Exchange Commission, concerning Pending Legislation Regarding Contests for Corporate Control, before the Subcommittee on Telecommunications and Finance of the House Comm. on Energy and Commerce (September 17, 1987).

I trust this letter is responsive to your questions. Should you have any further questions or concerns, please do not hesitate to contact me, or Richard G. Ketchum, Director, Division of Market Regulation, at (202) 272-3000.

Sincerely yours,

David S Ruder

David S. Ruder
Chairman

cc: The Honorable William Proxmire
Chairman, Committee on Banking,
Housing, and Urban Affairs

Robert Johnson
Chief Economist

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAHAM FROM
DAVID S. RUDER

Addendum B

Questions from Leslie Woolley

Q.1. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th.

What impact, if any, did the liquidation of mutual funds play in the downturn of Oct. 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquidate?

The role played by liquidations by equity mutual funds on October 19 is discussed in Chapter Two of the Division Market Break Study, at 2-17 to 2-18. The following is a summary of the Report's findings in this area.

- The Investment Company Institute ("ICI") conducted a survey of its members' shareholder redemption experience and trading activity during the market break. While the data indicated that redemptions increased on October 16 and 19, only approximately 2% of equity mutual fund shares were redeemed on these days and most fund redemptions were met from available cash reserves. However, there was a significant amount of selling by one major mutual fund complex. This fund complex sold a total of 25.8 million shares on October 19, with orders to sell 17.5 million shares entered before 10:00. 1/ This major fund had a policy of being fully invested. Therefore, it was forced to effect substantial

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1/ Unlike most program orders, which are sent to the NYSE floor in concentrated packages via the exchange's automated order-routing systems, this fund expected the firms handling the orders to "work the orders" in segments to maximize the prices received to raise cash for redemptions. The impact on stock prices of these sell orders, therefore, is more difficult to quantify for selected 10 minute or 30 minute intervals than is the case for program orders. For example, the fund estimates that slightly less than one-half of its sales entered before 10:00 were actually executed before 10:00. In addition, the fund has represented that the level of its trading on the 19th, under 4.5% of total NYSE volume, was not aberrational since the fund's transactions constituted roughly 3.6% of NYSE volume in October 1987 and ranged up to 4.4% in July 1987. Nevertheless, the magnitude of this fund's sell orders on the 19th and the fact that most of this activity was concentrated on the sell-side indicate that it did play a significant role for the day and particularly in the morning.

sales to respond to weekend redemptions as well as additional redemptions on Monday. Data regarding other funds on October 19 indicated that they were, in the aggregate, net buyers. 2/

Q.2. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th and 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

The short sale rule was not waived or relaxed in any manner on October 19th or 20th. The Report at 3-26 discusses the perhaps unresolvable question of whether, on balance, the short sale rule cushioned or exacerbated the October 19 market break.

The reference to a waiver may refer to a narrow interpretive position taken by Commission staff in 1986 permitting the liquidation of existing index arbitrage positions consisting of long baskets of stock and short index futures without requiring aggregation with short positions in other accounts if those short positions are fully hedged. See Report at 3-25. The Report concludes that sales in reliance upon this limited exception were not a significant factor in the October 19 decline.

2/ See Letter to David S. Ruder, SEC Chairman, from David Silver, ICI President, dated November 24, 1987. More detailed fund information was separately sent by the ICI to the Division. The Commission staff conducted limited inspections of 52 non-ICI member funds and found that the redemption and portfolio sales activities of these funds were generally less, percentage-wise, than that reported by the ICI for its member funds.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF
THE CHAIRMAN

RESPONSE TO WRITTEN QUESTIONS OF SENATOR D'AMATO FROM
DAVID S. RUDER

March 30, 1988

The Honorable Alfonse M. D'Amato
Committee on Banking, Housing, and Urban Affairs
United States Senate
Washington, D.C. 20510

Re: The October 1987 Market Break

Dear Senator D'Amato:

Thank you for your letter, dated November 12, 1987, in which you pose a number of questions concerning the October 1987 market break. I appreciate your patience in waiting for my reply. As you know, until quite recently Commission staff from the Division of Market Regulation ("Division") were engaged in reconstructing the market events of October and analyzing these events' impact on the securities markets. The Division's report, entitled The October 1987 Market Break (February 1988) ("Staff Report"), contains thorough analyses of many of the issues raised in your letter. Accordingly, the responses below frequently refer to the Staff Report. In addition, where applicable, I have cited my testimony concerning the market crisis before your Committee on February 3, 1988. 1/

Question 1. Does the SEC have regulatory authority over First Options, Inc.?

Yes. First Options of Chicago, Inc. ("FOC") is registered with the Commission as a broker-dealer under Section 15(a) of the Securities Exchange Act of 1934 ("Act"). It is subject to those provisions of the Act, and the rules adopted by the Commission thereunder, which apply to registered broker-dealers.

1/ See Testimony of David S. Ruder, Chairman, Securities and Exchange Commission, "Securities and Exchange Commission Recommendations Regarding the October 1987 Market Break," before the U.S. Senate Comm. on Banking, Housing, and Urban Affairs (February 3, 1988) ("February 3rd Testimony").

Question 2. How did the SEC and federal banking regulators become aware that Continental Bank violated the rule regarding lending limits to a single borrower?

On October 20, 1987, the Office of the Comptroller informed staff in the Commission's Division of Market Regulation that Continental Bank apparently breached a covenant between itself and the Office of the Comptroller.

Question 3. If First Options had not received the loan from Continental would you have had to close First Options? How many firms have you had to close since October 19, 1987?

It is not clear that FOC was ever in violation of the Commission's net capital rule which would have required FOC to cease business until in compliance. The question is now being pursued by the Chicago Board Options Exchange, Inc. ("CBOE"). Nevertheless, the subordinated loans by Continental Bank and its holding company were significant in averting, at least, liquidity difficulties for First Options.

A total of 58 firms doing business off the floors of the various exchanges had to cease business because they were in violation of the net capital rule. A majority of these firms subsequently obtained additional financing and recommenced a securities business. Only one of the firms that carried customer accounts (H.B. Shaine & Co.) had to be liquidated pursuant to the Securities Investor Protection Act of 1970. A thorough discussion of why these firms ceased operations at least temporarily during the week of October 19 is provided in Chapter Five of the Staff Report at pages 5-7 to 5-10.

Question 4. Were you included in the negotiations of the consent decree entered into between the Comptroller and Continental Illinois? If not, why not?

No. The settlement related entirely to violations of the covenant with the Comptroller. We are not aware of any negotiations in the past between any bank and the Comptroller in which the Commission was included.

Question 5. Can you tell us the particulars of the consent decree entered into by the Comptroller with Continental Illinois? If Continental violates the conditions of this decree, what sanctions would be imposed? Would such sanctions really be imposed since the U.S. government still owns 60% of the bank?

We do not have sufficient information with which to answer this question.

Question 6. Is the SEC continuing to monitor closely the trading activity of First Options?

Yes. The Commission staff has asked the CBOE, the self-regulatory organization that is the designated examining authority for FOC, to provide it with details concerning First Options' positions during the week of October 19, 1987. In addition, the CBOE is examining FOC's activities on a daily basis. Since the market break the CBOE and the Commission's Chicago regional office have conducted an on-site examination of the books and records of FOC. The findings of both groups will be forwarded to the Commission's Division of Market Regulation.

Question 7. Did you have any warning that on Monday, October 19, 1987, the market would be in for a heavy down day? Were you notified about the potential for this sell off, before the market opened?

On Friday, October 16, Commission staff began to anticipate that the markets could experience a huge sell-off on the following Monday. Accordingly, Commission staff began to prepare for the anticipated market volatility on the afternoon of Friday, October 16, continued this over the weekend, and extended the preparation to include monitoring the Tokyo and London markets on the morning of the 19th prior to the New York Stock Exchange ("NYSE") opening. A description of these preparations, as well as our pre-opening briefing by the NYSE staff on October 19, is provided in the Staff Report at page 2-25.

Question 8. What part did foreign markets and investors play in our markets' downturn?

The Commission staff's study disclosed that major world markets responded quickly and dramatically to price movements in other market centers. Events in foreign markets do not appear to have played a major role in the downturn in U.S. markets. Rather, U.S. markets seem to have led foreign markets in the decline. The staff did not find evidence to substantiate rumors that foreign investors were heavy sellers in U.S. markets, and foreign investor activity does not appear to have had a disproportionate effect on our markets. For a more detailed discussion of international market events and foreign investor participation in our markets, please refer to Chapter Eleven of the Staff Report.

Question 9. Could you please explain Portfolio Insurance activity and Index Arbitrage on the market on October 16, 19, and 20, 1987?

A detailed, program-by-program analysis of portfolio insurance activity and index arbitrage on October 16, 19, and 20 is provided in Chapter Two of the Staff Report, as well as the Trading Chronologies in Appendixes A - C and the tables and graphs in Appendix D. The overall effects of these and other forms of program trading during the market break also are discussed in Chapter Three of the Staff Report.

Chapter 10. Do you share NYSE Chairman Phelan's bad "gut" feeling of some types of program trading on triple witching days and do you have any suggestions on what should be done in these areas?

The Commission has believed for some time that efforts should be made to smooth out the price swings sometimes associated with quarterly expirations, so-called "Triple Witching" days, and toward this end has been working with the Commodity Futures Trading Commission ("CFTC") and securities and futures self-regulatory organizations to mitigate this volatility. Remedial measures which already have been taken include: (1) adoption of procedures to disseminate buy or sell order imbalances before the opening and closing of trading on quarterly expiration days for major NYSE stocks, for the purpose of attracting contra-side interest; and (2) encouraging the shift of some expirations to the market opening in lieu of the market close to (a) take advantage of stock opening procedures designed to handle order imbalances and (b) provide the stock market with a full trading session to minimize the price impact of an influx of buy or sell orders on the opening. While experience with these measures has been limited to several expirations, they appear to have helped to correct order imbalance and volatility problems historically associated with Triple Witching Fridays. Our review of trading on those days has not identified evidence of manipulative activity. The Commission will continue to monitor closely the efficacy of current expiration Friday procedures and whether additional or alternative measures are warranted. See Chapter One of the Staff Report at pages 1-7 to 1-8.

Question 11. On Tuesday [October 20], the NYSE asked member firms to resist from using program trading. On that day the Dow Jones Industrial Average ("DJIA") started the day up and at about noon the CME closed trading in index futures for about one hour -- about the same time when the DJIA was off

27 points for the day. You stated that the market was "tested" and turned around, posting a gain for the day. Can you further explain this occurrence?

On Tuesday, October 20, both the futures and stock markets experienced several price surges and reversals. Prices on the leading U.S. index futures market (the Chicago Mercantile Exchange, or "CME") and securities market (the NYSE) opened sharply higher -- shortly before 10:00 a.m. the Standard & Poor's 500 Stock Index ("SPZ") futures on the CME had gained almost 40 points, while the DJIA traded up to a 197.30 point gain by 10:28. The DJIA fell, however, by 227 points, by 12:21, as heavy selling pressure on the CME caused SPZ prices to decline. Market-making capacity on the NYSE became severely strained, causing trading halts to be called in 145 NYSE stocks because of order imbalances. The CME halted SPZ trading at 12:30 p.m. (Eastern Time). Trading in most other index and futures also was halted by this time, with the exception of the Major Market Index ("MMI") futures contract traded on the Chicago Board of Trade.

Beginning at approximately 12:30, the MMI futures rallied, posting a gain of 90 points, and by 1:12 p.m. the DJIA had recovered 126.2 points. The CME re-opened at 1:05, and the rally on the NYSE faded, with the DJIA losing 80 points in 27 minutes. Shortly after 2:00 p.m., however, the DJIA staged another rally, rising almost 170 points. It then declined about 80 points, closing up for the day by 102.27 points.

It appears that the see-saw nature of pricing on October 20 is accounted for by several factors, with the downturns reflecting extreme nervousness on the part of market participants and the depletion of market-making capacity in virtually all stock and derivative markets. Although heavy sell pressure threatened to overwhelm the market-making capacity of the NYSE by mid-day, the NYSE was able to stage a rally as news of pending corporate buy-backs of stock, and assurances of sources of liquidity for NYSE specialists, were announced. Also at this time, stock selling abated and investors looking for "bargain" prices returned to the securities markets to buy.

The interaction between the stock market and the index markets on Tuesday, October 20, is described in detail in Chapter Two of the Staff Report at pages 2-19 to 2-24 and in Appendix A at A-37 to A-43.

Question 12. If the CME futures were still trading and some specialists halted trading in several individual stocks --

does this not widen the spreads on the two markets prices, adding to the escalation of selling pressure? How can we avoid such occurrences?

The halting of trading in index component stocks will affect the apparent discount or premium of the futures contract. Isolated trading halts, however, periodically occur in even non-volatile markets. Most major market participants recognize the difference between real and apparent discounts, and adjust their strategies accordingly. A much more troublesome situation is presented when a significant number of the index component stocks have halted trading or failed to open during periods of extreme market volatility, such as the October market break. (A comparison of apparent and actual discounts in the futures on October 19 and 20 is provided in footnote 49 at pages 2-13 to 2-14 in the Staff Report.) Such situations raise serious regulatory concerns, which are discussed in Chapter Three at page 3-24 and Chapter Eight at page 8-22.

Question 13. Should margin requirements be increased in the futures markets? Why and to what level? What would the effect of higher margins have on current trading?

The Commission supports increasing, at least temporarily, the initial margin levels for stock index futures, to a level between 20-25% for market participants other than local traders on the floor of the futures exchanges. I believe that higher margin levels for off-floor futures markets participants could affect current trading in two ways. First, increased levels may discourage institutions from drastically increasing the velocity of their futures selling when the market experiences a downturn. The October market break demonstrated that the sale of these positions brings significant downward pressure to bear on prices in both the futures and equity markets. Second, higher margin levels may dampen speculative trading that, under normal market conditions, contributes to the perception of almost unlimited liquidity in the futures markets and drives futures, as well as component stock prices, above their intrinsic values. As we have seen, however, this liquidity quickly disappears during a market break, at a rate geometrically larger than in the lower - leveraged stock market, and futures and component stock prices collapse. The issue of reducing leverage in the index futures markets by possible revisions of margin levels is discussed in Chapter Three of the Staff Report at pages 3-20 to 3-22.

Question 14. Do you feel comfortable with the enforcement and surveillance activity of the NYSE and CME on financial futures in relation to the stock market?

The Commission staff is working with the CFTC and the NYSE to enhance current surveillance programs for index-related trading. Similarly, the securities and futures markets have scheduled meetings to discuss intermarket information sharing. The need for enhancements to current surveillance and enforcement programs is discussed in Chapter Three of the Staff Report at pages 3-33 to 3-34. In addition, possible improvements in reporting and record-keeping requirements for program trading are discussed at pages 3-26 to 3-28.

Question 15. Is there enough communication and cooperation between these two exchanges? Do you have any suggestions for the improvement of relations between these exchanges?

Under the auspices of the SEC and CFTC, the staffs of the NYSE and CME are actively seeking means of improving their communication and coordination procedures, particularly for periods of market volatility such as occurred in October 1987. Toward this end, representatives of the CME and NYSE met on February 10, 1988 to begin discussions concerning methods for improved coordination, and all exchanges, including equity, options, and futures markets, met on February 24. Another meeting for all markets took place on March 16, 1988. In addition, then-acting Chairman Hineman and I have sent letters to the Intermarket Surveillance Group urging that it provide for participation of the futures exchanges.

Question 16. In your opinion, is the CFTC undermanned to handle the growing responsibility of the futures market?

The Commission is not in a position to comment on the adequacy of staffing levels at the CFTC.

Question 17. Since the CME and NYSE now interact together (futures contracts and stocks) do they both have operational systems that compliment each other or do the two systems work against each other?

The operational and clearance/settlement systems of the NYSE and CME have evolved separately over the past decades to address the differing needs of their market places. Periods of extreme volatility and heavy trading volume such as occurred during the October market break illustrate the need for these systems to keep pace with these evolving, increasingly interconnected markets. The Staff Report addresses the need for improvements in the NYSE's operational system (see Chapter Seven), while overall improvements in equity clearance and settlement systems are discussed in Chapter Ten. In addition, as noted in the Report of the Presidential Task Force on Market Mechanisms, an effective system for cross-margining futures and securities products would be useful.

Question 18. The Quotation tape was running more than 2 hours behind actual trading -- what effect did this have on the efficiency of the market? Can we assume this is bad when up-to-date quotations can't keep up with the volume? Suggested solutions?

The tape disseminating stock quotations was not running two hours behind. There were delays of as much as two hours, however, in transaction data shown on ticker display devices toward the end of trading sessions on October 19 and 20. At times when trading is heavy, ticker delays are common because the stream of transaction data has to be slowed down so as to be readable to the human eye. The delays on October 19 and 20 were much longer than normal. It is important to recognize, however, that ticker display devices are a secondary source of transaction information. The principal source of current transaction and quotation information for listed securities is the Securities Information Automation Corporation's ("SIAC") "high-speed tape." This information is immediately disseminated to vendors who make it available to the public through recall terminals. The Staff Report found that there were only two brief outages in SIAC's high speed tape, both affecting transaction information but not the dissemination of quotations.

The NYSE believes that it has adequate personnel and facilities to ensure accurate trade and quote reporting and has assured the Commission that it is committed to maintaining this capability no matter what level of activity occurs. For a more detailed discussion of the performance of market information systems, please refer to Section A of Chapter Seven in the Staff Report.

Question 19. Are there any technological improvements that are needed to further advance efficiency or are some systems too far ahead of other trading operations that create a disadvantage of another operation? Our main objective is to have a "fair and orderly market".

The Commission's Staff Report and the Commission's February 3rd testimony identified a number of systems involving order routing, execution, trade reporting, and intermarket communications that should be improved to accommodate heavy trading and volatile market conditions. For example, the Commission has recommended to the NYSE that it increase its efforts to improve order processing by continuing to upgrade order-handling equipment. The Commission also has suggested that the Exchange take certain actions to allow the DOT system to process a high volume of orders more efficiently.

The NYSE has informed us that it currently has underway system improvements designed to handle 600 million share days by the end of 1988. In February 1988 the Exchange replaced its odd-lot system with an upgraded system and it plans by April 1988 to upgrade the limit order system as well, resulting in a 50% increase in capacity.

Question 20. What recommendations can be given to solve some of the wide swings the market has experienced? Do you suggest any legislative or regulatory action? What would you like to see done if this should occur again?

In the Commission's February 3rd testimony, the Commission stated that two factors -- (1) the unified nature of the U.S. markets for stocks, stock index futures, and stock index options, and (2) the existence of new trading mechanisms that can overwhelm the current capacity of markets -- suggest at least three areas for operational reforms. First, the capacity of individual markets to handle peak volume should be increased through operational changes. Second, improvements should be made in intermarket coordination. Third, steps should be taken to retard, at least during crisis periods, the increased velocity and volume of inter and intra-market trading. In this connection, the Commission recommended temporary margin increases for stock index futures. In my written testimony for tomorrow's hearings before your Committee I have indicated areas in which legislation may be necessary.

Question 21. Many of my colleagues complained at the November 4, 1987 hearing that the SEC is understaffed. How would additional staff at the SEC have effected the events of and subsequent to October 19, 1987?

I do not believe that additional staff at the Commission would have affected the events of October 19 and thereafter. During the market break Commission staff worked expertly in monitoring trading data, capital positions of broker-dealers and specialist units, mutual fund activity, and global market movements. In addition, Commission staff maintained close contact with all the self-regulatory organizations, and interviewed key market participants and exchange officials concerning the amount and type of trading being done. Although I believe the Commission was able to handle the events of October extremely well with its then-current staffing levels, the Divisions of Market Regulation and Investment Management have a need for additional staff in light of the increasing complexity of today's markets and the need for heightened levels of surveillance and market monitoring. The Commission presently is increasing staffing levels in these two divisions, and the Commission's proposed FY 89 budget, which I submitted to the Congress on February 22, seeks further increases.

I trust that this letter is responsive to your questions. Should you have any further questions or concerns, please do not hesitate to contact me, or Richard G. Ketchum, Director, Division of Market Regulation, at (202) 272-3000.

Sincerely yours,

David S. Ruder

David S. Ruder
Chairman

86 Trinity Place
New York, New York 10006
212 306-1130

Kenneth R. Leibler
President and
Chief Operating Officer

American
Stock Exchange

RESPONSE TO WRITTEN QUESTIONS OF SENATOR PROXMIRE FROM
KENNETH R. LEIBLER

March 29, 1988

Honorable William Proxmire
Chairman
United States Senate
Committee on Banking, Housing
and Urban Affairs
Washington, D.C. 20510-6075

Dear Chairman Proxmire:

In your February 22, 1988 letter, you requested additional information to complete the record of the February 4, 1988 hearing of the Committee on Banking, Housing and Urban Affairs. I have enclosed these answers as an attachment to this letter. (See attachment A.)

The hearings last month before the Senate Committee were useful and productive, and I appreciate the opportunity to have been a participant. The Exchange would be pleased to provide the Committee with any additional information it may require.

Sincerely,

1. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th.
What impact, if any, did the liquidation of the mutual funds play in the downturn of Oct. 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquify?

2. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th or 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

Attachment A **Memo**

Executive Offices

American Stock Exchange

Date: March 29, 1988

To: Kenneth Leibler

From: Richard O. Scribner, Senior Executive Vice President

Subject: Response to Senator Proxmire's February 22, 1988 Letter

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The following are responses to questions submitted by Senator Graham's staff as follow-ups to the February 4, 1988 hearing before the Senate Committee on Banking, Housing, and Urban Affairs:

Impact of Mutual Fund Liquidations

A relatively small proportion of Amex-listed securities are widely held by mutual funds, and, therefore, to the extent mutual fund liquidations occurred during the week of October 19, few Amex stocks would have been affected. Therefore, the Exchange has not undertaken to study what effect, if any, the liquidation of stocks by mutual funds contributed to the market decline on October 19.

We note, however, that, during the week of October 19, the smaller investor continued to have ready access to the Amex. The Exchange's order routing and execution systems largely accommodate smaller sized orders of individual public investors, and these systems functioned well during that week, both with respect to retail and to institutional interest.

Compliance With Short Sale Rule

The Exchange's Trading Analysis Division routinely reviews the daily specialists' reports of purchases, sales, and securities positions (Amex Form 191), and other data relating to member firm trading activity. The Amex has detected no violations by Amex floor members of the short sale rule (Rule 10a-1 under the Securities Exchange Act of 1934 and Amex Rule 7) with respect to Amex trading during the week of October 19.

Specialists and other Amex members were fully subject to all short sale rule provisions during the week of October 19, including restrictions on selling short on a minus or zero-minus tick. Such restrictions cannot be waived by the Exchange. Any failure to comply with such restrictions would constitute a violation of SEC and Amex rules, for which the Exchange would take appropriate action.

RESPONSE TO SENATOR GRAHAM's QUESTIONS
FROM NICHOLAS F. BRADY

1. A number of mutual funds have provisions which allow quick redemption of shares. On Friday, October 19, customer redemptions of these funds exceeded fund sales of stock by $750 million. These customers were entitled to repayment based on market prices at the close of business on Friday. Further, the mutual funds received substantial redemption requests over the weekend which left a large overhang of selling that had to be executed by those funds on Monday.

What was important about the sale of stock by mutual funds on Monday was not the volume but the timing. Mutual funds sold $90 million worth of stock in London before New York opened and $500 million in New York in the first half hour alone. The concentration of selling at the start of the day put initial downward pressure on the market.

Individuals played much less of a role because they are generally buy-and-hold investors. The market moved down so fast that individual investors had little time to react on Monday. On Tuesday, individuals, sensing bargains, were large buyers.

2. The uptick rule was not waived on the 19th and 20th. However, the Task Force felt that the apparent obsolescence of the rule warranted further investigation. Investors' ability to get around the short sale rule by operating in the futures market inherently places downward pressure on the stock market. The sale of a futures contract ultimately resulting in the sale of stock in the stock market may be viewed as inconsistent with the intent of the SEC rule. It is an issue that should be reviewed from an intermarket perspective.

RESPONSE TO SENATOR WIRTH's QUESTIONS

FROM NICHOLAS F. BRADY

1. We are encouraged to see the exchanges accept the concept of preplanned, pre-announced circuit breakers and by their willingness to experiment with different procedures such as the 50 point Dow Jones collar on the use of DOT for index arbitrage by the NYSE and the 15 point S&P price limits on the CME. However, we have several concerns about their ultimate efficiency. Foremost, they have been developed and implemented by each exchange with a view principally shaped by the concerns of their own members and without concern for the intermarket impact of any particular procedure. By not coordinating between the markets, some circuit breakers run the risk of disconnecting the marketplaces, an outcome we believe would destabilize all markets and increase volatility. Given the current market structure, we view the NYSE effort to cut off index arbitrage after a 50 point move as cutting off a vital link between the New York and Chicago markets. The events of October 19th and 20th make clear that severing this link destabilizes the one market system. Further, to the extent that the public has been sold these first efforts at circuit breakers as cure-alls for the markets' ills, we worry that their lack of results will backfire and further erode public confidence that the markets are orderly.

We believe that the lead in developing specific circuit breakers must be taken by the exchanges themselves. However, a number of guidelines should form the framework in which circuit breakers are developed.

(1) Circuit breakers must be coordinated across markets with a concern for their intermarket impact.

(2) The stock and futures markets should not be disconnected while both are still open.

(3) Consistent with their rationale, trading halts should be as brief as possible to least interfere with the free and open nature of our markets while providing a time out to think and act. Circuit breaker mechanisms must also provide coordinated restart procedures and effective information distribution procedures while trading is halted.

(4) Circuit breakers should be non-discretionary and predetermined so that they are a part of the exchanges' in-place operating framework.

(5) Circuit breakers should not be set at levels which cause them to be triggered frequently. They are not meant to be a part of the normal exchange operation, but to guard against a market meltdown.

2. We talked to numerous commercial banks about their actions on the 19th and 20th. There was no indication that the banks did not honor previously agreed to lending agreements or accommodate the needs of their clients. As one might expect, the banks acted in a very cautious manner in the face of the extraordinary circumstances of that week. To the best of our knowledge, the vast majority of the credit agreements are uncommitted lines.

3. I would not want to hazard a guess as to what would have happened if the Fed had not intervened. The Federal Reserve's responsive action was crucial to maintaining confidence in the stability of the markets.

Capital adequacy is certainly an issue for further investigation, but we saw it as less threatening to the financial system than the unbalanced nature of the current regulatory framework. Increased capital requirements will certainly add more of a buffer to the system. They would not, however, stop investors from following misguided investment strategies or convince specialists or market makers to risk more capital in a down market.

4. Your question is based on the premise that the global equity market is a reality. Although we are moving toward 24-hour trading, we are not there yet. In this respect, the equity markets have lagged far behind both the currency and credit markets in the creation of global trading. While the New York and Chicago exchanges are closely linked, the international equity markets move sympathetically. The independent performance of global equities in the first quarter of 1988 showed that domestic factors are still the key to the performance of each individual market.

One reason for the relative independence of individual markets is the low volume of trading in foreign shares. To give you an example, the daily dollar volume of the Dow 30 stocks that trade on the London Stock Exchange represents only 1% of what is traded in these stocks on the U.S. markets. The percentage is even smaller in Tokyo. In short, the overseas exchanges do not currently satisfy any meaningful demand for U.S. equity. Moreover, the growth in volume of U.S. equities overseas is not coming from a migration of business away from the U.S., but from an increase in foreign capital flow across borders. In both London and Tokyo, the activity in U.S. stocks is dominated by foreign investors, not by U.S. investors seeking different markets.

In short, the game is still played here. Going forward, as foreign investment barriers get broken down, there will inevitably be an increase in foreign investment in U.S. stocks, but it is still very difficult to envision that the dominant trading will not stay in the home market. There are simply too many advantages for investors to operate in the U.S. Our exchanges are the most liquid, orderly and honest markets in the world. Our clearing mechanisms are far superior to their international counterparts. Further, geographic and time zone proximity to U.S. companies provides a better understanding and information flow for domestic investors in U.S. equities

Ignoring the flaws in the market will neither solve the markets' problems nor position ourselves for the future. By addressing the shortcomings that became evident in October, we will continue to provide leadership for the world's financial markets. The recommendations of the Task Force are not excessive or detrimental, but rather represent an effort to bring the regulation and oversight of our markets up to date with the new financial realities of the 1980's. The bottom line is that we have to address the ills of our own markets regardless of the regulatory situation overseas. On October 19, the stock market did not perform its most crucial function; providing meaningful prices for investors. That simple fact mandates the necessity of an upgrade of our financial market system.

5. The securities industry has changed greatly in the last decade. October highlighted the fact that market participants did not have a complete understanding of the links between the various marketplaces or their ability to handle the demands placed upon them. The commercial banks handled themselves professionally, but their ability to handle new securities powers was not within the scope of our investigation.

RESPONSE TO SENATOR D'AMATO's QUESTIONS

FROM NICHOLAS F. BRADY

1. We believe that margins for the futures market should be made consistent with regard to stock. This does not necessarily mean that they should be set at the same level. A number of factors, such as settlement time, may affect the precise comparability of margins and may not necessitate their exact equivalency. However, we feel that margins should be set at similar levels in order to control speculation and financial leverage. In the world of one market, it makes little sense to provide traders with different degrees of leverage depending on whether they enter through the stock or derivative door.

2. Margins have two fundamental characteristics. First, margin requirements affect intramarket performance risk. Margins serve as a performance bond to secure the ability of market participants to meet their obligations. Second, margins represent collateral; thus, margin requirements control the leverage possible in the investment in any financial instrument.

On the first point - the intramarket financial performance control aspect of margin requirements - the concept of margins on futures differs fundamentally from that of margins on stock investments. Despite low margin requirements, the financial performance control aspect of futures margins has operated in a sound and effective manner on an intramarket basis.

However, margins are more than a financial performance control mechanism. All margin requirements have one aspect in common; margins are collateral and control the effective economic leverage achievable in any financial instrument. The similarity of the functions of margins in terms of leverage on either exchange tells us that margin levels must be harmonized.

3. As the futures market is dominated by professionals, margins in that market should be consistent with margins for professionals in the stock market.

4. We must take into account the fact that New York and Chicago represent one market. I sincerely hope that legislation will center on coordinated intermarket solutions that address the regulatory needs of the markets.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SASSER

FROM RICHARD L. FOGEL

SEC assessment of computer capabilities

During our crash study, the SEC's Division of Market Regulation staff told us that, although they had in the past been concerned with the operations of automated systems for supporting trading activity, since the early 1980's they had left technical performance matters up to the exchanges themselves. Indeed, the staff told us that they did not have the technical capability to conduct the complex evaluations we were calling for.

The kind of evaluations we think should be made include technical analyses of the planning, design and operations of systems critical to order processing and other support functions. They should ensure, among other things, that systems have adequate capacity to support expected demand and that proper controls are in place to assure the propriety of processing.

In light of October's events, the SEC consider expanding its capabilities and interest in making sure that operational systems are adequate. On page 7-26 of its own report on the crash, the SEC staff states,

> "The Division [of Market Regulation] is also considering expanding its oversight program to include periodic review of NYSE and Amex order-routing, execution, and support systems in general, to ensure that these critical exchange operations may perform more efficiently and effectively in the future."

Thus, one of the matters we will be following up on in our post-crash work is whether the SEC is, in fact, improving its capabilities and oversight in this area.

Treatment of individual investors

As we pointed out in our report, the most frequent complaint to self-regulatory organizations involved trade execution difficulty, such as non-execution of an order, execution at a price different than the one quoted, or problems specifically associated with market makers' of specialists' performance. Trade execution problems accounted for 63 percent of the total complaints reported to have been received by the exchanges.

We are just beginning an extensive review of how individual investors are being handled by both futures and securities self- and federal regulators. Our major concerns are twofold: 1) do investors have adequate information about the potential risks of various investment products (a question of suitability of the investor), and 2) are the current structure and procedures for considering and adjudicating complaints appropriate. Until we are farther into our analysis, it will be hard to form an opinion about how individuals were actually treated overall.

Our point about computer problems on the NYSE was that trading system breakdowns were a major reason that all traders, including individual investors, experienced difficulties. We think one of the best ways to ensure fair treatment to all is to maintain orderly trading systems. In times of stress, when established procedures may collapse, assuring fair access to market mechanisms becomes more problematic. It is in these times that those closer to the market may enjoy--and be tempted to take advantage of--faster access to market mechanisms. Therefore, if we can maintain orderly procedures we have better chance of providing fair access to all.

The Presidential Task Force (Brady Commission) stated on page vii of its executive summary that "When there are serious imbalances of orders, consideration should be given to favoring public customers in execution over institutional and other proprietary orders through the DOT system and to making the specialist book public to help attract the other side of the imbalance." This appears directed not only to the question of equality of treatment but also to the question of attracting orders to clear imbalances if, as happened in October, some institutions and other traders were lined up on one side.

But the Brady Commission also pointed out on pages 47 and 48 that system failures, as well as the overall erratic nature of price behavior on October 19 and 20, subjected all investors to somewhat capricious treatment. It stated that small investors were at an apparent disadvantage in speed of order execution because they were unable to reach brokers and because of failures of small order execution systems at the New York Stock Exchange and in the Over-the-Counter market.

So, although we have no specific ideas at this time about how one might guarantee favoring individual orders, we continue to believe that good systems operating as designed will help assure fair and equal treatment to all investors.

RESPONSE TO WRITTEN QUESTION OF SENATOR GRAHAM

FROM RICHARD L. FOGEL

GAO made no special study of the liquidation of mutual funds during the October crash, nor did it evaluate how the uptick rule was enforced.

QUESTIONS FOR THE RECORD
FROM SENATOR WILLIAM PROXMIRE

FOR JOHN PHELAN, NEW YORK STOCK EXCHANGE

Question #1 -- Has the New York Stock Exchange ever -- either directly or indirectly -- conducted a study on frontrunning? If so, what were the results of that study? Would you supply the Committee with a copy of that study?

Question #2 -- What specific steps do you plan to take to prohibit frontrunning?

Question #3 -- What specific steps do you think the regulatory agencies, the other self-regulatory organizations and the Congress should take to prohibit frontrunning?

Question #4 -- How serious a problem is frontrunning?

Answer

Historically, the securities industry has viewed frontrunning as conduct inconsistent with just and equitable principles of trade. It includes taking advantage of non-public market information by either (i) trading in a stock option with knowledge of an impending transaction (usually, but not necessarily, of block size) in the underlying stock or (ii) trading in an index option with knowledge of an impending transaction or series of transactions in a stock(s) that is (are) a component(s) of the underlying index. These interpretations of trading activity that may constitute a frontrunning violation remain unchanged within the industry.

Since the inception of the Intermarket Surveillance Group (ISG) in 1980, the Exchange has routinely supplied each of the options exchanges (i.e.,CBOE, AMEX, PHLX and PSE) with trading information relative to NYSE listed stocks that underlie stock (and later, index) options that are traded on each of these exchanges. It is a certainty that this information is routinely used by each options exchange in conducting its frontrunning surveillance and that from time to time this data has been used in facilitating formal frontrunning investigations conducted by the options exchanges. The NYSE cannot specifically identify each of these surveillances or investigations.

The Exchange has issued an Information Memo to its members and member organizations requesting (by May 6, 1988) comments regarding the Exchange's intent to adopt a rule whereby trading in index futures immediately prior to and with knowledge of the execution of one or more baskets of stock would constitute frontrunning and, thus, be a violation of just and equitable principles of trade (Exchange Rule 476).

In addressing the question of whether additional steps should be taken to prohibit frontrunning, consideration must be given to what steps, if any, the CFTC and contract markets should take to curtail index futures activity prior to the execution of large baskets of stock and to curtail activity in options on index futures prior to the execution of large index futures orders. The securities industry, on the other hand, must consider the potential for intermarket frontrunning violations involving index options trading prior to the execution of large orders in related index futures.

In this regard, the ISG, and the contract markets, established at the ISG meeting on April 5, 1988, a new ISG subcommittee. This group is due to report back to the full ISG by June, 1988 with respect to the types of information that must be exchanged between current ISG members and the contract markets to facilitate the surveillance for intermarket trading abuses, including frontrunning, involving index futures, index options and listed stocks.

Question #5 -- According to the Brady Report, on Tuesday, October 20, when the equity market was again in a freefall, a series of buyback programs by major corporations was announced. To what extent, if at all, were these buyback programs coordinated by investment bankers or the government in order to avoid a complete market collapse and if they were not coordinated in any manner, how do you explain the series of announcements on October 20? It has been alleged that some of the investment banking community encouraged their corporate clients to buyback their stock and then prior to the actual buyback profited from this advance information. To what extent, if at all, did this frontrunning occur?

Answer

Although there have been reports in the media concerning investment bankers' encouraging their corporate clients to buy back stock on October 20, the New York Stock Exchange has not developed evidence of any allegations of "frontrunning" by investment bankers, or profiting by trading on inside information related to buybacks.

Our Listed Company Advisory Committee has directed the staff to analyze the buy-back rule and will consider the pros and cons of modifying that rule to allow companies to enter crisis markets more easily.

Question #6 -- One of the conclusions of the Brady Report is that the growing concentration of power in the hands of a relatively few aggressive market participants can have a considerable effect on the market when they act in tandem. For instance the Report suggests that the actions of less than 10 large financial institutions were in large part responsible for the 509 point decline on October 19, 1987. What issues does such unbridled concentration of market power raise and how should they be addressed? How can the individual investor hope to compete in this type of environment and what is to prevent a few large institutions from deliberately acting in concert and manipulating the market in the future?

Answer

The facts as presented in both the Brady Report and the SEC's report are that a very few institutions --somewhere between one and about a dozen -- exercised enormous influence on the market during the week of October 19. The reports attribute much of the imbalance in the markets to the money management techniques of this handful of institutions.

But those changes in money management had been coming on for ten or fifteen years. In the bear market between 1970 and 1974, equity portfolios of institutions were marked down 50 to 60 percent. Money managers were convinced that, if they were going to stay in equities, they needed to find a way to hedge against any future decline of similar magnitude.

Aided by applications of advanced mathematics, they began to develop the kinds of formulas that would move them from cash to money market funds to stocks or vice versa based on what the market was doing.

But with the introduction in 1982 and 1983 of futures contracts on broad-based stock averages, they began to see even more attractive possibilities. Possibilities of staying in equities and protecting portfolios by taking hedging positions in these relatively inexpensive but highly leveraged derivative products instead of switching to cash.

For major institutions to conspire to manipulate the market is clearly in violation of current law and would subject the institutions to both civil and criminal proceedings.

Question #7 -- A major source of complaint during the October market turmoil was the opening pricing procedures of various exchanges (e.g., The Chicago Board of Options Exchange and the New York Stock Exchange). How are opening prices determined at the various exchanges and what changes, if any, would you recommend?

Answer

The opening of a stock occurs as close to 9:30 a.m. as possible. The specialist, after receiving new orders to buy and sell combined with orders entrusted to him for execution and indications of interest received via the Intermarket Trading Systems, determines the opening price based upon the forces of supply and demand.

Under normal circumstances, this procedure is completed within a few minutes of the opening. However, when unusual conditions exist, the specialist will communicate buy/sell imbalances to representatives of other member organizations to seek contra-side order flow. If the stock cannot be opened within 30 minutes from the beginning of trading, an impartial floor official or floor governor, who has the authority to supervise and regulate active or unusual openings, will be called upon to officially delay the opening. At this time a delayed opening message and an indication of the possible opening price range are disseminated over both the high and low speed tape and the Consolidated Quote System. If the imbalance is reduced as a result of member firms and their customers reacting to the disseminated price indications, the stock will open with the approval of a floor official or floor governor after a pre-determined period of time following the indication.

We are currently meeting and discussing with the other equities, futures and options exchanges improved intermarket communications to ease any problems concerning openings that may have occurred.

Question #8 -- On October 20, when the Chicago Mercantile Exchange closed at 12:15 p.m. the reaction of the stock market was dramatic: the DOW rallied 125 points in the next 45 minutes. When the futures markets reopened just after 1 p.m., the Dow lost almost 100 points in the next half hour. How do you account for this behavior and what does this say about the relationship of these two markets?

Answer

We can only surmise that when the Chicago Mercantile Exchange was temporarily closed on October 20, stocks, which were trading, continued to reach the valuation that the market placed on them. The fact that when the CME recommenced trading, the Dow significantly declined should not necessarily be interpreted as a cause and effect relationship. It was too short a period of time to reach any conclusions about the relationship between these two markets.

Question #9 -- Did specialists on the New York Stock Exchange trade in stock index futures on October 19th and/or in the period immediately following the crash? If so, to what extent?

Answer

Two specialists had stock index futures positions during the October market break; the largest position established consisted of 120 contracts.

Question #10 -- The Brady Commission found that although many specialists did their jobs well and some exhausted their resources in an attempt to stem the selling tide on October 19, "the performance of some specialists was poor by any standard." Among the Commission's findings:

> Some specialists on the Big Board helped fuel the crash by selling more stock then they bought.
>
> Many specialists mispriced the opening levels of their stocks on October 19 and 20 and these misjudgements "may have aggravated an already uncertain atmosphere."
>
> Thirteen of the 55 Big Board specialist units exhausted their buying power by the end of October 19, calling into question the level of capital present in the specialist system.

Is this is an accurate assessment of what happened? What should be done to improve the performance of the specialist?

Answer

We do not believe the Brady Commission's assessment is accurate. It is our belief that the specialist system performed better than any other equity dealer system across the country or around the world. While most specialists did a superb job, our evaluation of the performance of specialists has surfaced several cases where Exchange standards were not met. As a result, seven stocks have been reallocated to date. These reallocations have been based upon our assessment that sufficient specialist dealer participation was not present at appropriate price levels, and in certain cases appropriate public dissemination of market imbalances were not made. We have not found evidence to support a conclusion that some specialists "helped fuel the crash by selling more stock than they bought." In fact, specialist stabilization as measured by transactions against the minute-to-minute shifts in supply and demand were above the 90% norm for market stabilization. We do not subscribe to the net purchase/sale analysis conducted by the Brady Commission and the SEC staff due to our belief that it is important for specialists to reliquify positions in a nondisruptive manner and in accordance with long-standing Exchange rules.

The expectations of specialist performance are detailed in a job description which has been filed with the Securities and Exchange Commission. On an overall basis, we believe the specialists clearly met their dealer responsibilities.

While we agree with the Brady Commission's conclusion that "no realistic amount of capital could have stemmed the tide of the October market break," we also agree that it is important to enhance the buying power of specialists by improving their ability to borrow money. Notwithstnding this, the Exchange's Board of Directors has approved raising the minimum capital requirements of specialists from $100,000 to $1,000,000 and by increasing a position requirement from 5,000 shares to a 15,000 share position per common stock.

Question #11 -- What specific steps are you taking to improve the information gathering capability and capacity of the NYSE? What should be done generally to improve the information gathering capacity of the securities industry, as recommended by the Brady Report?

Answer

The exchanges -- equity, options, and futures have begun two efforts in the area of information gathering. In February and March, the exchanges met to understand the type and scope of information available within each arena. The focus of the first meetings was disseminating information on trading halts, and how to improve communication through hot lines and telephone conferencing for all exchanges. The meetings will continue and a third meeting is scheduled in May. Additionally, all exchanges will be meeting through the Intermarket Surveillance Group and sharing of intermarket regulatory information will be discussed. The Operations Advisory Group, established by the Exchange, is addressing the issue of information and how to best communicate information to the Member Firm Community.

We are currently investigating whether the identity of the beneficial owner of a stock position can be readily available for regulatory purposes.

Question #12 -- According to the Brady Report, on October 19, 1987, the New York Stock Exchange reported there were 67,673 trades for which Questioned Trade Reports ("QTR") were submitted (page 51). The GAO Report stated that "about 85 percent of the orders for stock trades..." were handled by exchange automated systems (page 69). It is our understanding that trades executed by systems such as SuperDOT are sent to the clearing house directly and thus cannot be the subject of QTRs.

(a) On October 19. 1987, how many trades were executed on the NYSE?

(b) What was the transaction volume, share volume, and percentage of these trades handled through each such automated system?

(c) How many trades occurred that day that were not handled by exchange systems that send compared reports automatically to the clearing house?

(d) What was the percentage of non-SuperDOT or other such NYSE trades that were the subject of QTRs?

(e) How many trades on October 19. 1987, required market action (rebuying or reselling securities erroneously believed to have been executed) to resolve?

(f) What was the overall loss (or profit) to exchange members as the result of being required to resolve these QTRs by such market action?

Answer

Trades executed by SuperDOT can be the subject of QTRs in those instances where the trade price has been inaccurately reported. The number of such instances is statistically insignificant

On October 19, there were 201,254 trades handled by the Exchange. However, when we discuss statistics related to our automated systems, we keep statistics in terms of orders, not trades. On October 19, the Exchange processed 470,000 orders. These orders accounted for 85% of all orders received and 25% of our volume. Any order which is not handled by the SuperDOT System is submitted to the clearing corporation by the member firm and therefore could be subject to a questioned trade. In referring to clearing data, all statistics refer to the individual sides submitted by the member firm. On October 19, the broker or non-system sides that were uncompared represented 5.4% of non-sides submitted.

Information on the market action taken by member firms to resolve errors or questioned trades and the resulting profit or loss is not available to the Exchange.

Question #13 -- You have suggested that the specialist system of market making has the virtue that it makes someone responsible for making a market. Why is this market making function necessary? Why not let buyers and sellers meet directly without using the intermediation of a market maker as is suggested in recent papers by Steven Wuensch, Peake-Mendelsohn-Williams and James Lorie? Isn't automated computer technology already available to provide such a system?

Answer

The specialist does not participate in all trades. Unlike proposed automated human-less computerized systems, the specialist provides the opportunity for buyer and seller to meet without the need for intervention by a dealer. However, in the absence of a near seller or a near buyer, the specialist in fulfilling his market making functions will sell or purchase shares for his own account to ensure a fair and orderly market. In the absence of a market maker such as a specialist, buyers and sellers would not have their orders satisfied and priced reasonably related to the last sale price; and could be faced with no contra-party to deal with at a given moment in time.

The specialist is not the buyer of last resort. Rather, the specialist is there to help make sure whichever way the market moves, it does so in an orderly fashion depending on market conditions. Dealers are not required, nor should they be required, to stand in front of a roaring financial "locomotive." Any demand that they do so clearly would jeopardize the existence of the dealer system. That would not serve the interests of the investing public who rely on a continous auction market.

The suggestions that are currently being made for alternative trading systems, or variations on those suggestions which have been made in the past and have been dismissed, since their implementation would not have produced a superior marketplace to that which is currently available at the Exchange.

Question #14 -- Some have suggested that the specialist system performance in October of 1987 should not be judged according to the usual criteria because it was an unusual circumstance. Do you agree with this position?

Answer

Time-honored measurements of specialist performance exist using price continuity, spread, depth, stabilization and percentage of specialist dealings. Such measurements have been reviewed and approved by the Securities and Exchange Commission and are understood by the specialist community. To abandon those traditional criteria totally and instead reflect on specialist performance during October not on a trade-by-trade basis but using some time bracket net buyers/sellers basis is clearly not appropriate. These traditional measurements should continue to be applied and the results adjusted to take into account market volatility.

Question #15 -- What social benefit is to be derived from the stabilization of stock price movements? If there are benefits, do they outweigh the costs associated with granting a monopoly to market making specialists?

Answer

Stabilization does not mean supporting stocks at a particular price. Stabilization does mean in the context of specialist dealer activity a proven measure that assures the public that the specialist is generally buying when the public is selling on "minus" or "zero minus" ticks when there are no near buyers to fill that void; or the specialist is selling on "plus" or "zero plus" ticks in the absence of near sellers to similarly fill a gap in supply and demand. In the auction marketplace of today, while the Exchange assigns the market making responsibility to a single specialist unit, there are in fact competing market makers through the Intermarket Trading System linking Regional Stock Exchanges from coast to coast; as well as competing orders being represented in each individual stock to better assure that the pricing mechanism is both fair and orderly and beneficial to the investing public.

Question #16 -- The Brady Commission report suggests that there were significant problems with specialist price setting at the opening on October 20, 1987. Some commentators have suggested that the OARS information should be made public before opening so that the asymmetry of information in favor of the specialist would be eliminated. Do you agree that the order books should be made public at the opening? Why or why not?

Answer

Specialists do not set opening prices -- they are set by the forces of supply and demand. It is the responsibility of the specialist to provide accurate and complete opening price indications and pre-opening information, such as the amount of stock paired off and excess to buy or sell, to inquiring members. This is an important aspect of our pre-opening process. We do not disseminate OARS information because it may not completely represent all pre-opening interest, e.g., interest expressed by brokers in the crowd and therefore, may mislead investors. In addition, that information is subject to change on a second-by-second basis. If there is a significant imbalance of supply and demand which will result in an extreme price disparity from the prior close, the specialist will utilize a delayed opening and price indication process under the supervision of an Exchange Floor Official. This procedure includes making the information available to the public.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SASSER FROM JOHN PHELAN

Sasser Question #1.

The issuance of program trading and the sub issues of portfolio insurance and index arbitrage, are enormously complex. You certainly know more than any of us could ever know on the subject. But let me just play devils advocate, and don't associate me with any point of view on the subject, but your action yesterday in closing off your computers to index arbitrage whenever the Dow swings by over 50 points raises some questions.

> 1. Index arbitrage supposedly brings futures prices and stock prices closer together -- Arbs buy futures when prices decline and this stems the decline of futures prices. Indeed, the Brady Commission believes that your closing off the Exchange's computers to index arbitrage on October 20th sent the futures market into a free fall.
>
> 2. The GAO points out what we all know -- that the crash was global -- but also stocks fell just as much in markets where there is no developed futures market. They didn't have any arbitrage in their markets.

What is your response to these points?

Answer

Index arbitrage depends on the yield spread between an index futures contract and its underlying securities. It is an activity that is engaged in by a very small number of institutions and firms. We agree with the SEC and others who have concluded that this activity can exacerbate market movements. The general public, the investing public, a great many of our listed companies and the vast majority of our member firms have a perception that index arbitrage increases market volatility and, thereby, harms the marketplace.

As I stated in my February 5 prepared statement, we disagree with the Brady Commission on this point and believe that as these restraints were applied, volume slowed down and volatility decreased. I think that each market has to have some circuit breakers and there are probably one or two that have to do with cross market relations as well. In other words, there are intramarket and intermarket circuit breakers. Aggressive buying by member firms in the futures market during October 20th and 21st, helped bring that market into balance, indicating that both markets can stablize themselves when disconnected as well as when they are connected.

There is a good deal about index arbitrage that remains to be investigated. Collectively, we must make some decisions on the role speculations should play in the marketplace. We are attempting to ensure the continued viability of the capital-raising function of our equities markets and the accompanying high degree of investor confidence in our market place.

Basically, the market break happened all over the world. If you look at the charts of the different markets, exchanges, and stocks, it's amazing. They almost all look the same. They all had the same force at the same time. The difference was in the amplitude of the decline. What all of this shows is that all of these markets are becoming tied more tightly together.

Sasser Question #2

How close did the New York Stock Exchange come to closing on October 20th? The GAO calls rumors of the closing a "critical communication problem" that created much uncertainty in the market.

And why did so many stocks stop trading? According to the GAO, the Chicago Board Options Exchange suspended trading because an insufficient number of the S&P 500 stocks comprising its option index were trading on your exchange? What are your thoughts?

Answer

The Exchange considered all options on October 20th but closing the market was not found to be necessary. Index stocks stopped trading because of order imbalances. This is a procedure consistently used by the Exchange and not unique to October 20th.

Sasser Question #3

Why didn't you consult the CFTC before you turned off your computer system to program trading on October 20th? Since this had a major impact on the futures market, don't you think the CFTC would have been interested? The GAO cites this as an example of a lack of intermarket coordination.

Answer

The importance of intermarket communication is apparent to the NYSE. Notification of the necessity to restrict use of our systems was made public to all market participants by a public announcement prior to trading on October 20th.

Sasser Question #4

I'd like to quote a sentence from the GAO report: "Computer problems, such as those which took place during the week of October 19, raise important questions regarding the Exchange's ability to provide for an efficient, fair, and equitable marketplace." How do you respond to that?

Answer

The events of last October must be placed in the proper frame of reference. The events of October 19 and 20 were truly extraordinary and unprecedented. While the Exchange experienced difficulties, they were on the margin, and we remained open to service our customers in as efficient, fair and equitable a marketplace as anywhere in the world.

Prior to October 19th, our planned peak volume was between 420 and 450 million shares, or more than two and one-half times our average daily volume up to that period. There was great skepticism within the industry that we would experience a 450 million share day, much less a 600 million share day, before 1990. Our five-year plan included increasing our processing capability to handle peak loads of 450 million shares in 1987, and 600 million shares in 1990.

In a period of only 48 hours, October 19 and 20, we adjusted to volume levels of more than three times our daily average. No other system in the world can make that kind of claim.

Since the October market break, the Exchange has taken the following actions in response to specific points raised in the GAO report.

> In November 1987, the DOT system's memory was increased and several of the system's data files were separated to allow more efficient processing. Further system enhancements are scheduled to be completed by July 1988 to improve DOT's processing capability even more.

In January 1988, program changes were completed in the Limit Order System to reduce system bottlenecks discovered during the October market break. A major upgrade of the system with more efficient computers was completed in March 1988, resulting in a 40 percent increase in capacity.

The NYSE had begun to completely replace our Automated Pricing and Reporting System prior to October 1987, but only a small fraction of the new system was operational by the week of the 19th. An entirely new system was completed on February 22, 1988.

The ability of the NYSE's Universal Floor Device Controller to store and process data has been increased. To add additional capacity, major portions of data normally routed through the Universal Floor Device Controller will be re-routed to other systems over the next three months.

A problem associated with the Universal Floor Device Controller during the week of October 19th was a backlog of orders directed to printers on the trading floor. On January 19, 1988, we opened our expanded Blue Room, adding 30 more printers for an increase of 20 percent. Seventeen more high-speed printers were added to the trading floor in March, 1988. In addition, we currently are working to double the speed of all existing printers.

At the same time, we also have increased the number of electronic display books on the trading floor by 70 percent, reducing the overall need for printers. In addition, we have increased the number of stocks on display books by over 140% since October 19, so that currently, there are approximately 1150 stocks on 367 display books.

The capacity of the NYSE's Post Support System to store and process orders has been increased through the use of additional computer power for the system

Enhancements in the NYSE's Universal Floor Device Controller and its printers that currently are underway will reduce the potential for delays in the Exchange's link with the Intermarket Trading System.

As of November 1987, the computers running the Consolidated Tape System have been replaced. As a result, the system now has the capacity to efficiently process a peak volume of 600 million shares.

Computer enhancements were made to the As-Of-Status System on October 24th and 25th, 1987, and we believe the problem has now been solved.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SANFORD FROM
JOHN PHELAN

Senator T. Sanford Question:

1. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th.

What impact, if any, did the liquidation of the mutual funds play in the downturn of October 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquify?

Answer

We have not done a study in this area. We recommend you contact the SEC and the Investment Company Institute on this question.

Question #2

During the hearings there was limited discussion of the uptick rule on short sales during the 19th or 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

Answer -- The uptick rule on short sales was not waived during the October markets.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SHELBY FROM JOHN PHELAN

Senator Shelby's Question

At yesterday's hearing, I learned that the Kansas City Board of Trade was the first exchange to apply for a stock index futures contract, followed by the New York Futures Exchange which is a wholly owned subsidiary of the New York Stock Exchange.

Q. What is the market share of the NYFE's New York Stock Exchange Composite Index?

A. For February 1988, the NYFE's New York Stock Exchange Composite Index futures contract had a 13% market share of the stock index futures market. In October, 1987, that market share was 11%.

Q. When did it begin trading?

A. May 6, 1982.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAHAM FROM
JOSEPH R. HARDIMAN

NATIONAL ASSOCIATION OF SECURITIES DEALERS, INC.
1735 K STREET, NORTHWEST
WASHINGTON, D.C. 20006
(202) 728-8100

JOSEPH R. HARDIMAN
PRESIDENT

March 1, 1988

Honorable William Proxmire
Chairman
United States Senate
Committee on Banking, Housing and
Urban Affairs
Washington, D.C. 20510-6075

Dear Senator Proxmire:

This is in response to your request for additional information respecting short sale regulation via the "tick test" and for information pertaining to the liquidity needs of mutual funds at the time of the October market break.

Q. 1. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th or 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

The "tick test" has been increasingly rejected as a useful approach to short sale regulation. A highly sophisticated SEC staff study, performed in the mid-seventies, led the Commission to propose eliminating the "tick test" requirement for a pilot group of stocks. More recently the NYSE commissioned "Katzenbach" study questioned the utility or desirability of a "tick test" requirement in today's markets. With the exception of the "tick test", short sale regulations applicable to NASDAQ stocks are essentially the same as regulations in place for exchange listed stocks.

Following a complete review of short selling activities in NASDAQ securities, former SEC Commissioner, Irving Pollack, in his report, Short-Sale Regulation of NASDAQ Securities (enclosed), specifically rejected the "tick test" rule for our markets. Concurrent with and partly as a result of the Pollack study, the NASD adopted several short sale requirements including the following:

- o All sales are required to be marked long or short for surveillance and recordkeeping purposes.
- o Monthly reporting and publication of short interest in all NASDAQ securities.
- o Borrowing and delivery requirements applicable to public customers of broker dealers were tightened up, requiring that, before a short sale order can be accepted, an affirmative determination must be made that the securities can be either borrowed or received from the customer by delivery date.

- **A mandatory requirement, pending at the SEC, that a "buy-in" arising out of a fail-to-receive of customer securities from NSCC, must be for cash or guaranteed delivery to assure that such purchases do not again result in a fail-to-deliver.**

While we are not in a position to comment on the effect of the "uptick rule" on trading in exchange listed stocks, there was no evidence of short selling problems in NASDAQ stocks during the October break. Also, neither the SEC report, the Brady Report or the GAO preliminary report commented on the absence of the "tick test" requirement in NASDAQ.

Q.2. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th.

What impact, if any, did the liquidation of the mutual funds play in the downturn of Oct. 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquify?

The NASD does not have independently developed statistics concerning mutual funds' search for liquidity or their redemption experience at the time of the market break. However, we have had some interesting responses from management of several of our large actively traded NASDAQ companies. They say that mutual funds, unable to sell some major exchange-listed securities in which trading was halted, were selling securities of comparable NASDAQ companies in the same industry group. The NASDAQ market was always open and sales could be implemented satisfying their liquidity needs, whereas the trading halts in comparable issues on the exchanges shut off liquidity at any price in those issues.

The Brady Committee and SEC reports of some mutual fund selling of securities in response to and anticipation of net redemptions must be considered in the context of the overall Investment Company Institute (ICI) statistics for mutual funds as a group, of the activities of fiduciaries generally and in the light of the unusual dimension of the market decline. Mutual funds as a group have been net sellers of equities on occasion in the past, although net redemptions by shareholders were not found to be an market problem. The net redemption experience during the October break, documented by the ICI, may indicate a greater responsiveness of mutual fund shareholders to equity market developments than was the case in the past.

The SEC and Brady reports and the ICI net redemption figures reinforce our previously published position against trading halts for reasons other than news developments or circumstances so extreme that the markets operationally cannot continue to function. The liquidity of individual and institutional portfolios should be the uppermost consideration in times of crisis, even though market congestion and price volatility may have everyone irritated and worried. In this regard, we do not distinguish between mutual funds and other fiduciaries or between the liquidity needs of direct and indirect investors. It would be a catastrophe to close the market facilities through which investors, directly and through financial intermediaries satisfy their liquidity needs at the precise time when the demand for such liquidity is greatest. Perceived illiquidity of equity assets may quickly be transmitted to a fear of illiquidity in other financial sectors causing much broader liquidity problems.

Finally let me take this opportunity to thank you and the other members of the committee for the opportunity to testify and present NASD's views. If we can be of further assistance, please let me know.

Sincerely,

Joseph R. Hardiman
President

COMMODITY FUTURES TRADING COMMISSION
2033 K Street, N.W., Washington, D.C. 20581
(202) 254-6970

Wendy L. Gramm
Chairman

June 1, 1988

RESPONSE TO WRITTEN QUESTIONS OF SENATOR GRAHAM FROM WENDY GRAMM

The Honorable Bob Graham
United States Senate
SD-241 Dirksen Senate Office Building
Washington, D. C. 20510-0903

Dear Senator Graham:

Enclosed are the responses of the Commission to your questions, which were recently forwarded to us by the Committee on Banking, Housing, and Urban Affairs. I understand that your questions, which were addressed to my predecessor, Kalo Hineman, followed Mr. Hineman's testimony before the Committee on February 3, 1988.

If we can be of further assistance, please call on us.

Sincerely,

Wendy

Wendy L. Gramm
Chairman

Enclosure

Q. Throughout our four days of hearings we discussed how the markets worked or did not work and the interrelationships of the markets. We did not look at the impact of some of the financial products like mutual funds during the week of the 19th. What impact, if any, did the liquidation of the mutual funds play in the downturn of October 19th? How much of a role was played as individuals as well as mutual funds themselves started to liquify?

R. Since the CFTC staff did not have access to trading of all types of accounts on the New York Stock Exchange (NYSE), we only have a limited amount of information to assess the impact of mutual funds on the collapse of stock prices in mid-October 1987. The Commission's large trader reporting system for futures markets, however, shows that mutual funds played no significant role in the stock index futures market during that period.

The CFTC staff did obtain from the SEC some stock trading data regarding a large mutual fund group on October 19. Those data plus other circumstantial information indicates that liquidating stock sales of mutual funds and small investors may have been a significant factor in the unprecedented fall in stock prices that day. In response to redemption requests that built up over the weekend from its large customer base, one mutual fund group placed sell orders for about 25.8 million shares on the NYSE. In addition that firm also sold substantial quantities of stock in London before the New York markets opened that day. That mutual fund's sell orders on the NSYE were heavily concentrated in the morning, with sell orders for 17.5 million shares being entered during the first half hour of trading alone. Those orders were equivalent to over 34 percent of total NYSE volume during that half hour.

It also is noteworthy that from the outset on October 19, the order execution systems on the New York Stock Exchange, other stock exchanges, and the over-the-counter markets became overloaded with massive sell orders. NYSE specialists delayed opening of trading in a significant number of stocks due to these sell-side order imbalances. While much criticism has been directed toward program stock trading during the October period, that trading did not account for the overloading of all those systems. For example, there is virtually no index arbitrage activity involving regional stock markets or the NASDAQ system. Widespread sell orders from small investors are a more likely explanation, particularly for the OTC market and the discount brokers.

Q.6. During the hearings there was limited discussion of the uptick rule on short sales. Was the uptick rule waived on short sales during the 19th or 20th and what impact, if any, would this event have played in the market going down as rapidly as it did?

R. To our knowledge, the uptick rules of the SEC and the New York Stock Exchange were not waived on October 19 and 20, 1987. However, on December 17, 1986, the SEC's Division of Market Regulation had issued a no-action letter to a major broker/dealer for short sales executed in certain circumstances as part of index arbitrage trades between stock and index futures or option markets.

Since the uptick rule applies only to the stock market, the CFTC did not analyze the effect of that rule on the market collapse of October 1987. Nor have we learned the results of any indepth inquiries conducted by the SEC or the NYSE. However, data collected jointly by the SEC and CFTC for our respective studies of that market collapse indicated that there were substantial short sales of stocks by firms that engaged in index arbitrage trades on October 14 through 19, 1987. On October 19, short sales of stocks totalled over 9 million shares, or nearly 25 percent of all stocks sold as part of those trades.

COMMODITY FUTURES TRADING COMMISSION
2033 K Street, N.W., Washington, D.C. 20581
(202) 254-6970

Wendy L. Gramm
Chairman

June 1, 1988

RESPONSE TO WRITTEN QUESTIONS OF SENATOR D'AMATO FROM WENDY GRAMM

The Honorable Alfonse M. D'Amato
United States Senate
SH-520 Hart Senate Office Building
Washington, D. C. 20510-3202

Dear Senator D'Amato:

Enclosed are the responses of the Commission to your questions, which were recently forwarded to us by the Committee on Banking, Housing, and Urban Affairs. I understand that your questions, which were addressed to my predecessor, Kalo Hineman, followed Mr. Hineman's testimony before the Committee on February 3, 1988.

If we can be of further assistance, please call on us.

Sincerely,

Wendy

Wendy L. Gramm
Chairman

Enclosure

Q.1. Do you believe that the margins on the Chicago exchanges should be set as high as the margin requirements set by the Fed for the securities industry?

R. This question rests upon the erroneous assumption that futures margin and securities margin levels are not now comparable. In comparing margin requirements in the securities and futures markets, it should be noted that the Federal Reserve Board has established a substantial number of exemptions to the 50 percent margin requirement generally applicable to public securities customers, including exemptions for market-makers, arbitrageurs and other securities professionals. Under these exemptive provisions, only good faith margins fixed by negotiation between the lender and the borrowing customers, which are not subject to any specified minimum, are required. Moreover, the Federal Reserve Board has delegated authority to establish margin levels for securities options to the securities exchanges on which such options are traded. The levels of these margins were comparable to futures margins on October 19.

Notwithstanding the present similarities, there remain structural and functional differences between futures and securities margining systems that may dictate different regulatory safegards.

We believe that the adequacy of the margin requirements in effect at the Chicago exchanges was demonstrated during the market break in October 1987, when all clearing organizations collected all margins due them without default, no futures broker carrying customer funds failed, and no futures customers lost money due to a futures broker failure.

Q.2. Do the margins on commodities transactions serve the same function as margins on securities transactions?

R. In evaluating the soundness of the margin systems currently in place in the futures and securities markets, it should be recognized that the futures margining system reflects fundamental differences between the function of margin in futures and securities transactions. The futures markets are mechanisms for the transfer of risk, for example, from a party subject to price risk because of its primary commercial or financial operations. The futures margining system is designed to measure the risk involved in each transaction and to establish an appropriate margin level based upon market volatility and the type of trading involved in the transaction. This system requires that both sides to a trade, the long and the short, make margin deposits and that all losses and gains on positions be paid daily such that, throughout the life of the contract and at settlement, no debt on any futures contracts remains outstanding.

Futures variation margin must be paid to the clearinghouse by each trader's clearing member to cover any losses on a daily, pay-as-you-go basis. One hundred percent of all losses must be paid out by the firm each day in cash or the markets cannot open for trading the next day. The daily, pay-as-you-go nature of the futures margin system is a key protection afforded by the futures margin system.

The current system of futures margin authority has worked well over the years and continues to do so. It is one of the principal reasons, along with the requirements that customer funds be segregated from a firm's proprietary funds, minimum capital requirements and constant monitoring for compliance with those rules, that no customer of a firm which is a member of a futures industry-self regulatory organization has ever lost a penny due to the financial failure of the firm throughout the more than fifty-year history of the Commodity Exchange Act, including during the events of October 1987.

The soundness of the futures margin system was demonstrated during the October market decline. For example, data for the period between October 1, 1985 and December 10, 1987, show that maintenance margin for the S&P 500 futures contract was sufficient to cover a single day's market loss ninety-six percent of the time.

Q.3. Is there a justification for a difference in the margin requirements between securities and commodities transactions due to the different nature of the players in those markets?

R. As the CFTC's large-trader data indicate, the S&P 500 futures contract is primarily an institutional market, and its principal users do not have leveraged positions. On October 19, reporting commercial traders 1/ held about 70 percent of the total open interest. Most commercial traders in stock index futures markets are institutional investors, principally pension funds or broker/dealers, that are engaged in index arbitrage or are hedging their stock market risk. In contrast, large speculators, who are subject to position limits in the S&P 500 futures market as in all futures markets, held less than 5 percent of the total open interest in mid-October 1987. Thus, in the stock index futures market there is a notable absence of large speculative positions that could be indicative of differential leverage between the stock and futures markets.

1/ Under CFTC regulations, a reporting commercial trader in the S&P 500 futures market is one who has a position exceeding 300 contracts and who has indicated that use of the contract is for hedging or arbitrage purposes.

The futures positions of hedgers and other commercial users of stock index futures generally are not leveraged. Most have equivalent offsetting positions, normally in the stock market but also in other derivative markets. Thus, many of the players in the futures and securities markets are the same person or the same types of investors.

As the Brady Commission recognized, the institutional or professional nature of the stock index futures markets renders it appropriate to compare futures margin requirements with those applicable to securities professionals rather than those applicable to individual stock investors. (Brady Report at 65).

As with question 1, there is an erroneous assumption that margin levels for futures contracts are not now comparable to margin levels for securities. However, we do not believe that the leverage possibilities are very different between the securities and futures markets. If a customer purchased an S&P futures contract for December 1987 delivery (the nearby contract) at the closing price of the contract on October 15, 1987 and held the contract open through October 19, 1987, the customer would have had to deposit a total of $55,875 before the market opened on October 20, 1987 in order to maintain the position, even assuming the customer qualified for the lower initial margin available to a hedger. This includes $7,500 initial hedge margin, $8,000 to cover the loss incurred on October 16 and $40,375 to cover the loss incurred on October 19. The total margin payments of $55,875 represent over 55 percent of the underlying equity value of the futures contract at the close on October 19, $100,750. Had the customer bought equivalent securities on October 15, he would not have been required to make any payment until October 22 or later due to the general five business day settlement system in securities trading. Futures trading requires daily payment in cash of all losses and is a 100 percent, pay-as-you-go system.

Q.4. The SEC Report, unlike the CFTC Report, concludes that program trading, index arbitrage and portfolio insurance exacerbated and accelerated the decline on October 19th and 20th. Contrary to the SEC Report, is the CFTC suggesting that these trading practices had no impact on the decline? Did they play a beneficial role or were they merely neutral? How do you explain the differences between the conclusions reached by the SEC and the CFTC reports on this issue?

R. As your question indicates, general program trades of stocks must be distinguished from other forms of program trading, such as portfolio insurance and index arbitrage, when assessing the possible market impact of that trading. In addition, one also must distinguish trading in a single market from arbitrage trading strategies in which sales in one market are linked with equivalent sized purchases in another. Furthermore, to assess relative market impact program trading must be reviewed in the broader context of all stock trading during mid-October 1987, not in isolation.

The CFTC staff report concluded that while index arbitrage stock sales and portfolio insurance sales of futures contracts were of significant magnitudes on October 19, they were not the principal cause of the large drop in stock prices that day. These forms of program trading did not account for the bulk of the large order imbalances facing NYSE specialists before the market even opened on that Monday morning, nor was stock index arbitrage trading a principal cause of the overloading of NYSE operational systems or the NYSE trading volume of over 600 million shares that day despite all those operational problems. The CFTC report says the 508 point drop in the Dow Jones Industrial Average was not caused by the hypothetical "cascade" or "melt-down" effect that we have read about in the press.

Our data, supported by trade interviews and the Brady Report, show that index arbitrage was substantially curtailed after 2 p.m. on October 19 because of execution problems on the NYSE. Yet that was the period in which the Dow had its greatest fall of the day, declining from about 2000 to close at 1739 (-260 points). Program stock sales not associated with futures transactions were much more significant on the afternoon of October 19 than were index arbitrage stock sales.

Portfolio insurance futures sales on the CME were of fairly constant magnitude throughout the day. They were not at the largest levels when futures prices fell the most. In fact, they were largest between 10:30 and 11:30 a.m. while future prices were trending upward and index arbitrage was inactive. After 2 p.m., when stock prices fell the most, portfolio hedge selling on the CME did not increase. During the last hour of trading portfolio insurance futures trading was less than 15 percent of total CME volume.

One further point should be noted. The SEC's analysis of program trading includes portfolio insurance and other program stock sales that were executed only in the stock market, that is, outright sales of baskets of stocks by institutional investors, in addition to index arbitrage. Since our focus was on hedging sales in the futures markets and their potential interaction with index arbitrage trades, we left it to the securities regulators to report on those stock sales, that, unlike index arbitrage, did not have a futures counterpart.

COMMODITY FUTURES TRADING COMMISSION
2033 K Street, N.W., Washington, D.C. 20581
(202) 254-6970

THE FOLLOWING WAS SUBSEQUENTLY SUBMITTED FOR THE RECORD

Wendy L. Gramm
Chairman

February 26, 1988

Senator Alan J. Dixon
United States Senate
331 Hart Senate Office Building
Washington, D.C. 20510

Re: Margin Requirements in the United Kingdom and Japan

Dear Senator Dixon:

This is in response to your recent inquiry to the Commodity Futures Trading Commission ("Commission") regarding margin requirements in the United Kingdom and Japan.

At the present time, the Commission is aware of two stock index futures contracts trading on exchanges in the United Kingdom and Japan: the Financial Times-Stock Exchange (FT-SE) 100 currently trading on the London International Financial Futures Exchange (LIFFE) and the Stock Futures (OSF) 50 trading on the Osaka Securities Exchange (OSE).

As of February 12, 1988, the margin requirement for one March 1988 FT-SE 100 contract, which was valued at approximately 42,575 pounds sterling, was 3000 pounds sterling. In dollar terms, the margin requirement is equivalent to $5,280 for a contract valued at $74,932, or 7% of the value of the contract. The margin requirements are set by LIFFE and the Commission is aware of no maintenance margin requirements or price limits applicable to the FT-SE 100.

In the case of the OSF 50, which is marked-to-the-market on a daily basis, the OSE imposes two different levels of margin, one for customers and a different one for members of the OSE. The initial margin requirement for customers is 9% of the sales value of the contract, and the maintenance margin requirement, which is computed on a daily basis, is 6%. A drop in the account equity below the maintenance margin level will trigger a margin call to the customer. For OSE members, the margin requirement is 6% of the value of one contract calculated using the closing price on the first trading day for each delivery month. For this purpose, all the long and short positions held by members are netted. As of February 22, 1988, the closing price for one March 1988 OSF 50 contract in dollar terms was approximately $491,837. Therefore, the initial margin requirement for customers in dollar terms is $44,265.

With respect to circuit breakers, the OSE has listed the following price limits with respect to the OSF 50:

TABLE OF DAILY PRICE LIMIT
(all prices are quoted in Japanese Yen)

Base Price	Price Limit
Less than 500	15
500 or more but less than 600	18
600 or more but less than 700	21
700 or more but less than 800	24
800 or more but less than 900	27
900 or more but less than 1,000	30
1,000 or more but less than 1,200	36
1,200 or more but less than 1,400	42
1,400 or more but less than 1,600	48
1,600 or more but less than 1,800	54
1,800 or more but less than 2,000	60

(In the event the base price is 2,000 or more, 6 yen for each 200 is added to 60).

Thus, at the current price level, the applicable price limit is 42 yen. The Commission has been informed that margin levels and price limits are set by the OSE in consultation with the Securities Exchange Advisory Commission, which is a permanent advisory commission that operates under the auspices of the Ministry of Finance.

In addition, we are enclosing a copy of Table 7 to the Chicago Board of Trade's Supplemental Written Submission Before the Senate Committee on Banking, Housing and Urban Affairs dated February 4, 1988, which sets forth a margin summary of one futures contract position of the Major Market Index, and a copy of a letter to Senator Donald W. Riegle which encloses a numerical example of the differences between futures margin and securities margin for customers, which supplements former Acting Chairman Kalo A. Hineman's recent testimony before the Senate Banking Committee.

Please let me know if I can respond to any question which you may have concerning any of the foregoing.

Very truly yours,

Wendy L. Gramm

Wendy L. Gramm
Chairman

Enclosures

TABLE 7

MARGIN SUMMARY OF ONE FUTURES CONTRACT POSITION OF THE MAJOR MARKET INDEX

NOTE: One MMI futures contract was purchased on October 14, 1987 at a price of 494.50 points, or $123,625.00

October 14-20 1987	Closing Market Value Of The MMI Futures Contract	Daily Change In The Value Of The MMI Futures Contract	Accumulated Paid-In Margin At Opening Of Trading	Accumulated Paid-In Margin As A Percent Of The Day's Closing Market Value	Percent Of Previous Day's Price Change Settled Before Opening	Credit Extended
Wednesday	$119,125	-$4,500.00	$4,500.00 1/	3.78%	--	0%
1. Thursday	$116,775	-$2,350.00	$9,000.00 2/	7.71%	100%	0%
2. Friday	$111,250	-$5,525.00	$11,350.00	10.20%	100%	0%
3. Monday	$84,125	-$27,125.00	$16,875.00	20.06%	100%	0%
4. Tuesday	$91,125	$7,000.00	$46,500.00 3/	51.03%	100%	0%

1/ Initial Margin Deposit of $4,500.
2/ $9,000 = $4,500 Initial Deposit + $4,500 loss in value.
3/ Margin requirements increase to $7,000 from $4,500.

1934 1988

NATIONAL SECURITY TRADERS ASSOCIATION
ONE WORLD TRADE CENTER, SUITE 4611, NEW YORK, NY 10048 (212) 524-0484

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March 3, 1988

The Honorable William Proxmire
Senate Dirksen Office Building
Washington, D.C. 20510-6075

Dear Senator Proxmire:

At the suggestion of Steven B. Harris, Esq., we are pleased to furnish you with our views in respect of the inquiry being conducted by the Committee on Banking, Housing and Urban Affairs, into the events surrounding the securities markets' actions of October 19, 1987. The National Security Traders Association was formed in 1934 and today represents 7000 individual professional members in the United States, Canada, the United Kingdom and Europe. These comments have been circulated among the members of our Association's Board of Governors, Past Presidents and Affiliate Presidents who are in accord with these sentiments.

Initially, we believe that the Reports by The Presidential Task Force on Market Mechanisms (the Brady Commission Report) and the staff of the Securities and Exchange Commission ("SEC") represent an extremely valuable examination of the problems encountered during the week of October 19. These Reports point the way towards possible actions which are designed to prevent a recurrence of those events. We will not presume to supplement the findings and conclusions of these studies, and, accordingly, we will focus primarily on certain specific areas of concern. We hope that the views we express from our position in the securities industry will be helpful to the Committee.

AFFILIATES

Alabama Security Dealers Association
Baltimore Security Traders Association
Boston Securities Traders Association
Security Traders Association of Chicago, Inc.
Cleveland Security Traders Association
Security Traders Association of Connecticut
Dallas Security Dealers Association
The Denver Security Traders Association
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Securities Association of Virginia, Inc.
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Security Traders Association of Wisconsin, Inc.

We note initially that the recommendations for reform and corrective action advanced by the SEC's staff are of such a nature that, for the most part, they can be implemented by the SEC and the various self regulatory organizations ("SROs") such as the National Association of Securities Dealers, Inc. ("NASD") and the New York Stock Exchange ("NYSE"), without any further legislative authorization. One very significant area which can probably be addressed without the necessity for enabling legislation is the closer coordination of clearance and settlement procedures in the equities markets with those in the derivative markets (See Section 17A of the Act). So, too, the SEC and SRO's already have the authority to set standards of financial responsibility for the market makers and specialists. We believe they should re-examine the capital requirements of these two groups for the purpose of determining whether conditions such as prevailed during the week of October 19 should require more stringent, even though temporary, net capital provisions. Based upon our limited information, it would appear that capital requirements for market makers and specialists should be increased and that investment firms provide for anticipated capital availability during stressful times.

While we acknowledge the Committee's oversight responsibilities, we believe that, in the first instance, the SROs and the SEC have a more continuing and closer day-to-day relationship with the securities industry, its members and its problems, thereby facilitating the formulation of appropriate remedial rules and regulations. They should be permitted the freedom to test operational theories in an atmosphere which is flexible enough to permit change and modification based upon "hands-on" experience. We further believe that the financial markets today are so fluid it is necessary for the regulators to have the capabilities to adjust regulatory criteria as expeditiously as possible to meet ever changing needs. Both the NASD and the NYSE have already taken immediate and direct actions to meet many of the problems described in the two Reports. We are confident that they will continue to move forward to design and adopt practices and procedures to fulfill their respective obligations to maintain free and orderly securities markets.

As an example of the steps being taken, we are sure you have noted that the NASD has moved to strengthen its Small Order Execution System and the NYSE has adopted experimental procedures to assist its market to handle program trading. Although many have advocated the elimination of program trading, we do not believe that an outright ban is the proper remedy. However, there is considerable concern among our members as to the overall effect of program trading on our markets. We are in general agreement that free markets should be permitted to function without restraint. Nevertheless, program trading is a relatively recent addition to investment strategies and we believe has not been fully reviewed. The NYSE has undertaken an in-depth inquiry into this aspect of our markets and has proposed certain temporary limitations on the use of program trading which, we hope, will render significant results for future guidance. So, we commend the NYSE in seeking a solution which would permit the continuation of program trading while protecting the market place.

There remain certain specific areas of concern which are beyond the authority of either the SROs or the SEC to address. Thus, we offer our views on these matters: jurisdictions of the regulatory agencies, margin requirements and regulation of the worlds' financial services markets.

JURISDICTION

When the Congress enacted the Securities Exchange Act of 1934 ("Act") it created the SEC to oversee this country's securities markets. All regulatory aspects of the securities industry were vested in the SEC, including the various market places where securities, as then known, were traded. Although the Act recognized the regulatory participation of the exchanges it still retained for the SEC oversight authority and responsibility. When, in 1940, the Congress amended the statute by the addition of the Maloney Act, which provided for the recognition of a securities association, of which the NASD is the only one, it still retained for the SEC the oversight authority and responsibility.

Through this one-half century, during which the SEC and the several SROs have been responsible for the maintenance of fair and orderly markets, an extremely responsible working relationship between the SEC and SROs has developed and grown. Moreover, the extent to which these entities have exercised joint regulatory authority over the securities markets has expanded significantly. As new practices and procedures have evolved in the industry, the SEC and the

SROs have studied and worked together to review these innovations and, where necessary, moved to regulate them under conditions consistent with their statutory mandates. We believe that today the working relationship between the SEC and the SROs represents a unique partnership which has no equal in our Government.

However, since the early years of this decade there have been introduced to the financial markets of this country the so-called derivative products - futures contracts and options contracts. Although both instruments are directly related to the equity markets which are under the supervision of the SEC and the SROs, the regulation of some derivative products are not subject to SEC oversight, nor are the marketplaces on which these products are traded. Instead, their regulation has been delegated to the Commodity Futures Trading Commission ("CFTC"), which was originally founded to oversee this nation's commodity markets. The CFTC's purpose and raison d'etre were not the same as those of the SEC. Rather, it was entrusted with controlling the trading of agricultural futures, a completely different segment of our economy. We are totally convinced that the CFTC plays an extremely vital role in the operation and regulation of the country's commodity markets and, in light of its historical mandate, is appropriately a significant arm of the Government. But, it appears evident from the Reports that the split authority over the country's equity markets and the markets for the equity-related derivative products did not facilitate or enhance the attempts by the SEC or the SROs to exercise speedy and workable control over the events of the week of October 19. Moreover, on a longer term basis, it must be recognized that the manner, type and style of regulation exercised over the derivative products and their markets are of a completely different nature from those related to the equity markets.

We note, as an example, the difference in margin requirements in the two separate fields. In the equity area, the margin requirements are established by the Board of Governors of the Federal Reserve System pursuant to Section 7 of the Act and are enforced by the SEC. (See, also, Section 2(1), Securities Exchange Act of 1934, 15 U.S.C. 78b(1)). On the other hand, the margin for commodity trades is set by the market in which the commodity contracts are traded for the purpose of assuring payment when the futures contracts become due. Thus, the margin requirements for two directly related products are set by two separate and independent entities for different purposes using separate criteria. This type of fragmentation detracts from the maintenance of fair and orderly markets.

In light of the foregoing, it is our conclusion and recommendation that the regulatory authority over the equity and derivative markets should be lodged with a single agency and that agency should be the SEC.

This conclusion is also logical for two additional reasons. First, the equity markets are the primary markets. The derivative markets exist only because of the equity markets. Moreover, they trade in tandem in that what happens in the equity markets dictates what will happen in the derivative markets. It is axiomatic, therefore, that the agency responsible for the primary equity market should also have responsibility for the derivative markets.

Secondly, as we noted above, the securities markets have become globalized. What happens in Tokyo presages what will happen in London which, in turn, sets the stage for what will happen in New York. Although the foreign markets have entered into the derivative product area, they have not progressed as far as we have in this country. Nevertheless, they are continuing to develop these markets. Indeed, The New York Times (February 11, 1988, p. D13, col. 2) reported that the International Stock Exchange in London was encouraging its members to adopt sophisticated techniques such as index arbitrage. In the other world markets, regulation of these derivative products is conducted by the same regulator as the equity markets. It would be far more efficient and far less duplicative for one U.S. agency to have the authority to deal with its foreign counterparts on all phases of our financial markets rather than have a bifurcated approach which is required now by the present state of circumstances.

Finally, as recognized by the Brady Commission Report, there is in actuality only one market, comprised of interrelated parts - exchange markets, over-the-counter markets and derivative markets. Our experience dictates that this is a proper conclusion under all the circumstances and we agree with it. One market demands one regulator for uniformity and economy. Indeed, the Congress, through the enactment of the 1975 amendments to the 1934 Act, specifically recognized that it was in the national interest to foster a national market system through, among other things, "the linking of all markets for qualified securities" to assure that our markets remain "an important national asset." (See, Section 11A, 1934 Act).

MARGIN

As we noted above, the imposition of margins in the equity and derivatives markets is made by different entities for different purposes. Even in the absence of one overall supervising agency, we believe that, nevertheless, margins should be the province of one agency. Since margins in this country have such a direct bearing on other aspects of our domestic economy and will have an ever-growing importance on an international level, we believe that the responsibility for margins on derivative products should rest with that agency which has had the responsibility for margins in the equity markets - the Board of Governors of the Federal Reserve System. In this way, margins in both markets could be more easily established in conjunction with one authority and maintained on a coordinated basis.

While we do not advocate that margins on derivative products should be equal to those in the equity markets, we strongly believe that there should be a direct relationship between equity and derivative margin rates. For example, if margins should change in the equity markets, then there should be a proportional change in the derivative markets such as on the S&P 500 futures.

As a corollary, it is our opinion that recently there has not been sufficient attention given to the margin rates in the equity markets. During the obvious speculative atmosphere during the last year, higher margins might have tempered some investment decisions thereby avoiding the rapid market rise last summer and the subsequent even faster retrenchment. In other words, on hindsight, one could say that the SEC and the Federal Reserve Board could have devoted more attention publicly to the overheated markets during 1987 and exercised the authority to slow down the markets by increasing margins. Certainly, in the future, there should be greater coordination between the SEC and the Federal Reserve in respect of margin levels and their use in controlling speculation in the securities markets.

Of course, this proposition leads back to the issue of overall agency jurisdiction since the SEC enforces the margin requirements in the equity markets and, appropriately, should enforce margin requirements in the derivative markets for economy and uniformity. Thus, this raises one more reason for SEC jurisdiction over both markets.

INTERNATIONALIZATION

The various studies for the week of October 19 all agreed that the securities markets of the United States have become a major part of the international financial services industry. What happens in our markets affects the markets in Tokyo and London as well as the rest of the world. Similarly, the events which take place in other markets have a direct bearing on our markets. Indeed, there are already more than 500 corporations whose securities are traded on a worldwide basis -"World class securities." This number can be expected to grow. And, as electronic capabilities become more and more sophisticated, trading across national boundaries from market to market will intensify. It can be expected that it may soon become impractical and impossible for this country to be able to control market actions solely as a domestic discipline.

The need for international cooperation is, therefore, of the utmost urgency demanding a concerted effort by both the Congress and the Executive Branch to facilitate international cooperation. It is in this area we believe the Committee should concentrate much of its resources. It can work with the SEC to determine the ways and means to accomplish this goal and then sponsor such legislation as may be necessary to effectuate it.

CONCLUSION

To recap, we urge the centralization of regulation of both the equity and derivative markets under the SEC. That agency already has the expertise and authority to meet this responsibility without further enhancement of the Act at this time. In point, as we stated earlier, the SEC and the SRO's are the appropriate organizations to coordinate clearance procedures in the several markets and thereby alleviate the cash flow and delivery problems which hampered the markets on October 19 and 20. The ideal situation would be same-day comparisons with next-day settlements. However, we are mindful of operational limitations which would prevent that at this time. Nevertheless, we believe it is a goal toward which we should all be aiming.

Secondly, the Federal Reserve Board should have authority to set margin rates for both equity and derivative markets.

Thirdly, while we oppose trading halts per se, we are in accord with the steps being taken by the SRO's to examine the effect on the markets of so-called "circuit breakers" which would take effect on a temporary basis in order to enable markets and investors alike to keep current with significant market movements such as were experienced during the week of October 19.

Finally, we believe that all markets, under prevailing conditions, performed very well during those trying hours. Faced with volumes and price changes in unprecedented parameters for which existing systems were not designed, the market makers and specialists, for the most part, acquitted themselves in an extraordinary fashion. The recent steps being taken are designed to meet such challenges in the future. We believe they will work and should have the opportunity to prove themselves. We also note that the Federal Reserve had in place contingent plans in anticipation of just the type of markets we saw in October. The NASD and the NYSE had also anticipated in its planning the eventuality of increasing heavy markets. The SEC and the SRO's should continue to be encouraged to develop similar "fail safe" mechanisms which could be immediately implemented in the event of future need.

Parenthetically, we note that the Congress has under active consideration at this time whether the Glass-Steagall Act should be repealed, amended or left unchanged. We respectfully suggest that the events of October 19 place in a new light the continuation of that Act and, accordingly, we believe that more study is required to determine the long-term effects of lowering barriers to the securities industry by permitting the entry of banks, either directly or indirectly through affiliates. Even if portions of that statute are relaxed, it was made abundantly clear that there should be close oversight of banks' securities activities and good sense argues in favor of SEC Chairman Ruder's admonition that the SEC have appropriate jurisdiction over any securities business in which banks may be permitted to engage.

We appreciate the opportunity to express our thoughts to you. If there is any more that we can do to assist you, please let us know.

Respectfully,

Gary D. Pender
Gary D. Pender
Chairman

John L. Watson
John L. Watson III
President